

TIMBER NOTICE OF SALE

SALE NAME: Amber

AGREEMENT NO: 30-073108

AUCTION:May 24, 2002 starting at 10:00 a.m.,
Central Region Office, Chehalis, WA

COUNTY: Grays Harbor, Thurston

SALE LOCATION: Sale located approximately 8 miles by road northeast of Malone, WA

PRODUCTS SOLD
AND SALE AREA: All timber, except as described in Schedule L, bounded by timber sale boundary tags and the B-3000 Road in Unit #1; all timber, except as described in Schedule L, bounded by timber sale boundary tags, special management boundary tags, reproduction, and the B-3000 Road in Unit #2; all timber bounded by right-of-way tags along Spur 2 and Spur 3 Roads on parts of Section 5 in Township 17 North, Range 4 West, W.M., and parts of Sections 32 and 33 in Township 18 North, Range 4 West, W.M., containing 49 acres, more or less.

ESTIMATED SALE VOLUMES AND QUALITY:

Species	Ave	Ring	Total	Grades By Percent								
	DBH	Count	MBF	1P	2P	3P	SM	1S	2S	3S	4S	UT
Hemlock	14.8		1,692						50	48	2	
Douglas fir	22.8	8	430				2		78	20		
Red alder	14		62					10	8	66	16	
Red cedar	10.9		13							74	26	
Spruce	12									100		
Sale Total			2,197									

MINIMUM BID: \$330,000.00

BID METHOD: Sealed Bids

PERFORMANCE
SECURITY: \$66,000.00

SALE TYPE: Lump Sum

EXPIRATION DATE: September 30, 2003

ALLOCATION: Export Restricted

BID DEPOSIT: \$33,000.00 or Bid Bond. Said deposit shall constitute an opening bid at the appraised price.

HARVEST METHOD: Cable and shovel logging methods. Shovel logging shall be in accordance with Shovel Logging Specifications on file at the region office. Lead end suspension required on all cable settings. Yarding shall be suspended when soil rutting exceeds four (4) inches as measured from natural ground line. Any disturbance greater than that mentioned above shall immediately be water barred by hand, grass seeded, and yarding suspended until such time that the Contract Administrator can be shown that future yarding disturbance will be within contract requirements. Landing debris shall be piled and a fire trail two (2) feet wide shall be constructed to mineral soil around each landing as directed by the Contract Administrator. A detailed felling and yarding plan, approved in writing by the Contract Administrator, shall be required prior to any harvest activities. Shovel yarding will not be permitted from September 30 to May 1 unless authorized in writing by the Contract Administrator to prevent soil damage and erosion.

ROADS: 48.27 stations of required reconstruction. 2.25 stations of optional construction. 8.60 stations of optional reconstruction. Rock for this sale may be obtained from the State's Upper Lytle Quarry in Section 24, Township 17 North, Range 5 West, W.M.; or the State's Five Forks Quarry in Section 22, Township 18 North, Range 4 West, W.M. Rock may also be obtained from the proposed Buck Ridge Quarry in Section 5, Township 17 North, Range 4 West, W.M. Road construction will not be permitted from September 30 to May 1 unless authorized in writing by the Contract Administrator to prevent sub-grade damage and soil erosion. The hauling of forest products will not be permitted from September 30 to May 1 unless authorized in writing by the Contract Administrator to prevent sub-grade damage and soil erosion.

ACREAGE DETERMINATION

CRUISE METHOD: Acreage determined by traverse. Error of closure in Unit #1 is 1:155, in Unit #2 is 1:152. See Pre-Cruise and Cruise Narratives.

FEES: \$19,780 with \$1,978 due on day of sale. In addition, a charge of \$29,110 is due on day of sale. This is an additional payment to the bid price.



TIMBER NOTICE OF SALE

SPECIAL REMARKS: Purchaser assumes responsibility for any county road use permits and for all costs associated with permits and extra maintenance or repair levied by a county for any county road used by the Purchaser. Any and/or all operation(s) of the sale may be temporarily suspended when, in the opinion of the Contract Administrator, there is the possibility of sediment being delivered to any live water.



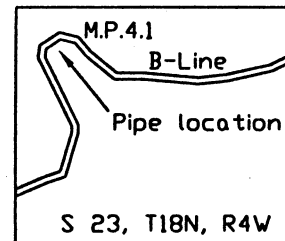
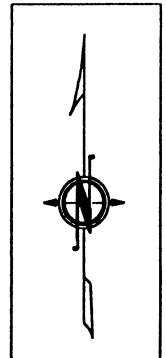
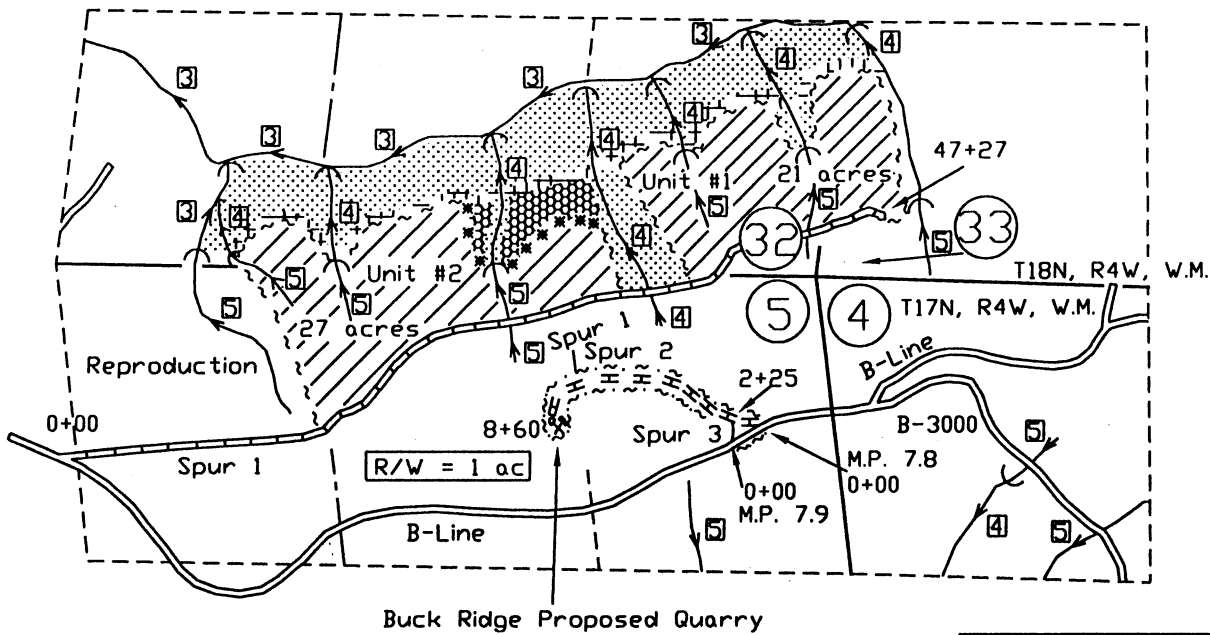
TIMBER SALE MAP

SALE NAME: Amber
AGREEMENT NO.: 73108
Thurston
TRUST(S):

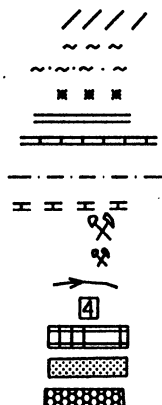
REGION: Central
COUNTY(S): Grays Harbor,

Forest Board Repayment, State Forest Board Purchase

TOWNSHIP 18 NORTH, RANGE 4 WEST, W.M.
TOWNSHIP 17 NORTH, RANGE 4 WEST, W.M.



LEGEND
Sale Area
Sale Area Boundary Tags
Right-of-Way Boundary Tags
Leave Tree Area Boundary Tags
Existing Road
Required Reconstruction
Optional Reconstruction
Optional Reconstruction
Proposed Rock Source
Rock Source
Stream
Water Type
Wind buffer
Riparian Management Zone
Wildlife/Green Retention Tree Area



SCALE: 1" = 1,000'
Drawn By: AAK
Date: November 3, 2001

Trust: 02, 42
Volume: 2,197 Mbf
Acres: 49
Elev: 685 to 1,010 feet

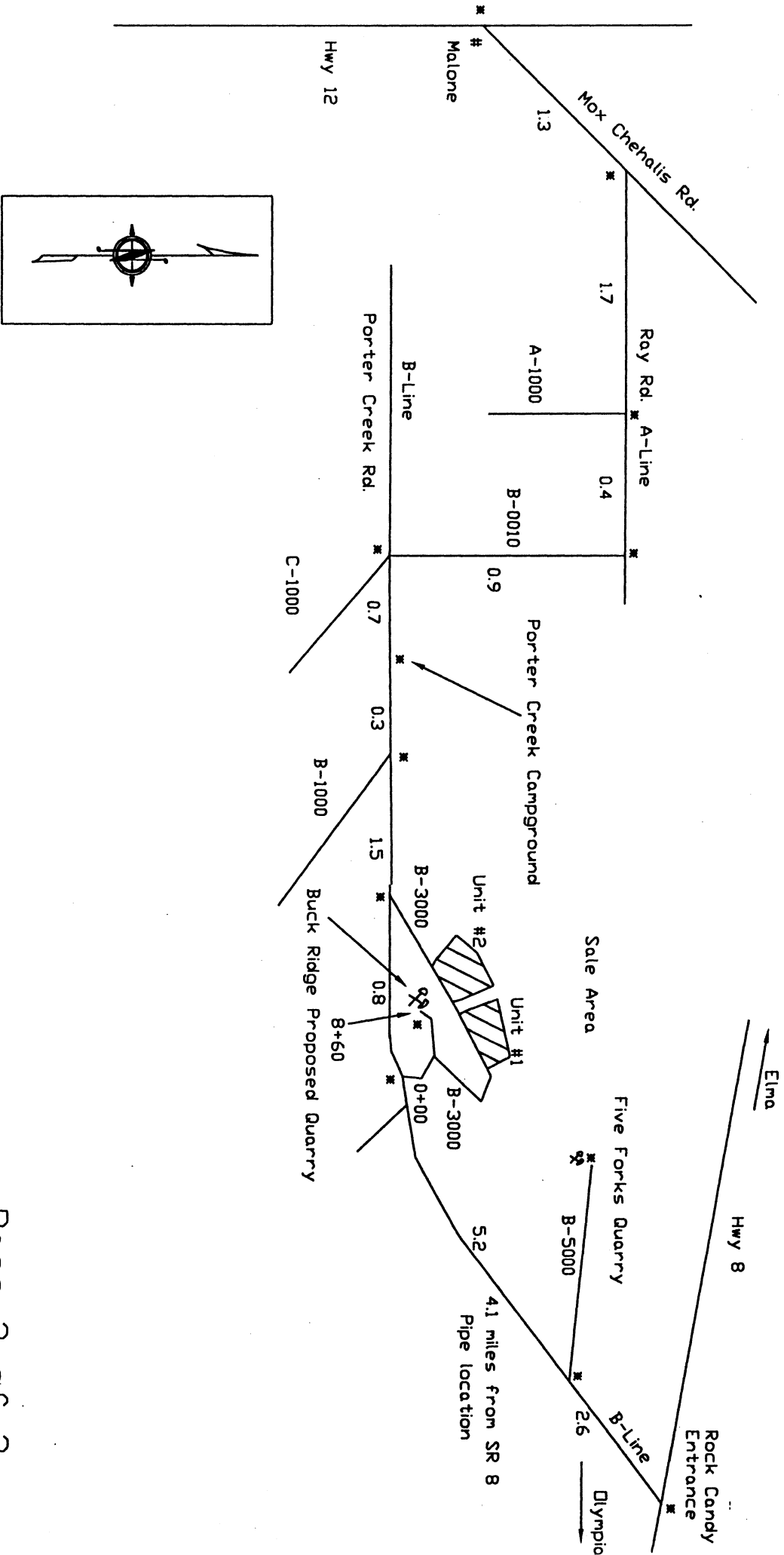
Feet
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TIMBER SALE MAP

SALE NAME:	Amber	REGION:	Central
AGREEMENT NO.:	73108	COUNTY(S):	Grays Harbor,
Thurston			
TRUST(S):	Forest Board Repayment, State Forest Board Purchase		

Vicinity Map
Not to Scale



**STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES**

**BILL OF SALE AND CONTRACT FOR
FOREST PRODUCTS**

Export Restricted Lump Sum AGREEMENT NO. 30-073108

SALE NAME: Amber

**THE STATE OF WASHINGTON DEPARTMENT OF NATURAL
RESOURCES, HEREINAFTER ACTING SOLEY, IN ITS PROPRIETARY
CAPACITY, STATE, AND PURCHASER, AGREE AS FOLLOWS:**

Section G: General Terms

G-010 Products Sold and Sale Area

Purchaser was the successful bidder on May 24, 2002 and the sale was confirmed on _____. The State, as owner, agrees to sell to Purchaser, and Purchaser agrees to purchase, cut, and remove the following forest products: All timber, except as described in Schedule L, bounded by timber sale boundary tags and the B-3000 Road in Unit #1; all timber, except as described in Schedule L, bounded by timber sale boundary tags, special management boundary tags, reproduction, and the B-3000 Road in Unit #2; all timber bounded by right-of-way tags along Spur 2 and Spur 3 Roads, located on approximately 49 acres on parts of Section 5 in Township 17 North, Range 04 West, W.M., and parts of Sections 32 and 33 in Township 18 North, Range 04 West, W.M., in Grays Harbor and Thurston Counties as shown on the attached timber sale map and as designated on the sale area. Timber purchased under a contract that is designated as export restricted shall not be exported until processed. Timber purchased under a contract that is designated as exportable may be exported prior to processing.

G-020 Inspection By Purchaser

Purchaser hereby warrants to the State that they have had an opportunity to fully inspect the sale area and the forest products being sold. Purchaser further warrants to the State that they enter this contract based solely upon their own judgment of the value of the forest products, formed after their own examination and inspection of both the timber sale area and the forest products being sold. Purchaser also warrants to the State that they enter this contract without any reliance upon the volume estimates, acreage estimates, appraisals, pre-bid documentation, or any other representations by the State Department of Natural Resources.

G-031 Contract Term

Purchaser shall complete all contract required work prior to September 30, 2003.

G-040 Contract Term Adjustment - No Payment

Purchaser may request an adjustment in the contract term. Claim must be submitted in writing, must be received by the State within 30 days after the start of interruption or delay, and must indicate the actual or anticipated length of interruption or delay. The State may grant an adjustment without charge only if the cause for contract term adjustment is beyond Purchaser's control. The cause must be one of the following and

the adjustment may be granted only if operations or planned operations under this contract are actually interrupted or delayed:

- a. road and bridge failures which deny access;
- b. access road closures imposed by road owner;
- c. excessive suspensions as provided in clause G-220;
- d. regulatory actions not arising from Purchaser's failure to comply with this contract which will prevent timber harvest for a period less than 6 months.

G-051 Contract Term Extension - Payment

Extensions of this contract term may be granted only if, in the judgment of the State, Purchaser is acting in good faith and is endeavoring to remove the forest products conveyed. The term of this contract may be extended for a reasonable time by the State if all of the following conditions are satisfied:

- a. A written request for extension of the contract term must be received prior to the expiration date of the contract.
- b. Completion of all required roads and compliance with all contract and regulatory requirements.
- c. For the first extension, not to exceed 1 year, payment of at least 25 percent of the total contract price.

For the second extension, not to exceed 1 year, payment of at least 90 percent of the total contract price.

The payments shall not include the initial deposit which shall be held according to the provisions of RCW 79.01.132.

- d. Payment of an amount based on 12 percent interest per annum on the unpaid portion of the total contract price.

All payments, except the initial deposit, will be deducted from the total contract price to determine the unpaid portion of the contract.

- e. Payment of \$966.85 per acre per annum for the acres on which an operating release has not been issued. In no event will this portion of the extension charge be less than \$200.00.
- f. Extension payments are non-refundable.

G-053 Surveys - Sensitive, Threatened, Endangered Species

Whenever the State determines that a survey for sensitive, threatened, or endangered species is prudent, or when the Purchaser determines a survey is prudent and the State agrees, Purchaser shall perform such surveys at Purchaser's expense and to the standards required by the State. The survey information shall be supplied to the State.

G-060 Exclusion of Warranties

The PARTIES AGREE that the IMPLIED WARRANTIES OF MERCHANTABILITY AND MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE and ALL OTHER WARRANTIES EXPRESSED OR IMPLIED, ARE EXCLUDED from this transaction and shall not apply to the goods sold. For example, THE FOLLOWING SPECIFIC MATTERS ARE NOT WARRANTED, and are EXCLUDED from this transaction:

- a. The MERCHANTABILITY of the forest products. The use of the term "merchantable" in any document is not intended to vary the foregoing.
- b. The CONDITION of the forest products. The forest products will be conveyed "AS IS."

- c. The ACREAGE contained within any sale area. Any acreage descriptions appearing in the timber notice of sale, timber sale contract, or other documents are estimates only, provided solely for administrative and identification purposes.
- d. The VOLUME, QUALITY, OR GRADE of the forest products. The descriptions of the forest products to be conveyed are estimates only, made solely for administrative and identification purposes.
- e. The CORRECTNESS OF ANY SOIL OR SURFACE CONDITIONS, PRE-SALE CONSTRUCTION APPRAISALS, INVESTIGATIONS, AND ALL OTHER PRE-BID DOCUMENTS PREPARED BY OR FOR THE STATE. These documents have been prepared for the State's appraisal purposes only.
- f. THAT THE SALE AREA IS FREE FROM THREATENED OR ENDANGERED SPECIES, or their habitat. The State is not responsible for any interferences with forestry operations that result from the presence of any threatened or endangered species, or the presence of their habitat, within the sale area.
- g. THAT THE FORESTRY OPERATIONS to be performed under this contract WILL BE FREE FROM REGULATORY ACTIONS by governmental agencies. The State is not responsible for actions to enforce regulatory laws, such as the Washington Forest Practices Act (chapter 76.09 RCW), taken by the Department of Natural Resources or any other agency that may affect the operability of this timber sale.
- h. Items contained in any other documents prepared for or by the State.

G-062 Habitat Conservation Plan

The State has entered into a Habitat Conservation Plan (HCP) with the U.S. Fish and Wildlife Service and the National Marine Fisheries Service (the Services) to address state trust land management issues relating to compliance with the Federal Endangered Species Act. The activities to be carried out under this contract are located within the State's HCP area and are subject to the terms and conditions of the HCP, and the Services' Incidental Take Permit Nos. 812521 and 1168 (collectively referred to as ITP), or as amended hereafter by the Services. The ITP authorizes the incidental take of certain federally listed threatened and endangered species, as specified in the ITP conditions. All HCP materials, including the ITP, are available for review at the State's Regional Offices and the administrative headquarters in Olympia, Washington.

By signing this contract, Purchaser agrees to comply with the terms and conditions of the ITP, and the HCP, which shall become terms of this contract. The State agrees to authorize the lawful activities of the Purchaser carried out pursuant to this contract, PROVIDED the Purchaser remains in compliance with the terms and conditions of both the HCP and ITP. The requirements set forth in this contract are intended to comply with the terms and conditions of the HCP and ITP. Accordingly, non-compliance with the terms and conditions of the HCP and ITP will render the authorization provided in this paragraph void, be deemed a breach of the contract and may subject the Purchaser to liability for violation of the Endangered Species Act.

Any modifications to the contract shall be proposed in writing by the Purchaser, shall continue to meet the terms and conditions of the HCP and ITP, and shall require the prior written approval of the Region Manager before taking effect.

G-063 Incidental Take Permit Notification Requirements

- a. The Purchaser shall immediately notify the Contract Administrator of new locations of permit species covered by the Incidental Take Permits (ITP) that are discovered within the area covered by the State's Habitat Conservation Plan (HCP), including, but not limited to: locations of occupied murrelet habitat; spotted owl nest sites; wolves; grizzly bears; nests, communal roosts, or feeding concentrations of bald eagles; peregrine falcon nests; Columbian

white-tailed deer; Aleutian Canada geese; Oregon silverspot butterflies; and additional stream reaches found to contain bull trout. The Purchaser is required to notify the Contract Administrator upon discovery of any fish species found in streams or bodies of water classified as non-fish bearing. In all circumstances notification must occur within a 24 hour time period.

- b. Upon locating any live, dead, injured, or sick specimens of any permit species covered by the ITP, the Purchaser shall immediately notify the Contract Administrator. The Purchaser shall notify the Contract Administrator if there is any doubt as to the identification of a discovered permit species. Purchasers may be required to take certain actions to help the Contract Administrator safeguard the well-being of any live, injured or sick specimens of any permit species discovered, until the proper disposition of such specimens can be determined by the Contract Administrator. Any such requirements will be explained to the Purchaser by the Contract Administrator during the Pre-Work Conference. In all circumstances notification must occur within a 24 hour time period.
- c. Purchaser shall refer to a specific ITP number, PRT-812521 or ITP 1168 (copies which are located in the region office) in all correspondence and reports concerning permit activities.
- d. Provisions and requirements of the ITP shall be clearly presented and explained to Purchaser by Contract Administrator during the Pre-Work Conference as per contract clause G-330. All applicable provisions of the ITP and this clause must be presented and clearly explained by Purchaser to all authorized officers, employees, contractors, or agents of Purchaser conducting authorized activities in the Timber sale area. Any questions Purchaser may have about the ITP should be directed to the Contract Administrator.

G-064 Permits

Purchaser is responsible for obtaining any permits not already obtained by the State that relate to Purchaser's operation. Forest Practice Application and Hydraulic Project Approval permits obtained by the State shall be transferred to Purchaser. Purchaser is responsible for all permits, amendments and renewals.

G-065 Regulatory Disclaimer

The State disclaims any responsibility for, or liability relating to, regulatory actions by any government agency, including actions pursuant to the Forest Practices Act, Ch. 76.09 RCW, that may affect the operability of the timber sale.

G-066 Governmental Regulatory Actions

a. Regulatory Risk

Except as provided in this clause, Purchaser assumes all risks associated with governmental regulatory actions, including actions taken pursuant to the Forest Practices Act, Ch. 76.09 RCW, and the Endangered Species Act, 16 U.S.C. 1531-1544 and any Habitat Conservation Plan between the Department of Natural Resources and the U.S. Fish and Wildlife Service or any other agency now in place and as may be amended, or hereafter created, that may affect the operability of the timber sale.

b. Increased Costs

Purchaser shall be responsible for any increased operational costs arising from any applicable foreign or domestic governmental regulation or order that does not cause contract performance to become commercially impracticable or that does not substantially frustrate the purpose of the contract. If impracticability or frustration results from Purchaser's failure to comply with this contract, Purchaser shall remain responsible for payment of the total contract price notwithstanding the impracticability or frustration.

c. Sale Area

When portions of the sale area become subject to a foreign or domestic governmental regulation or order that will likely prevent timber harvest for a period that will exceed six months, and Purchaser has complied with this contract, the following shall apply:

- i. If 40 percent or less of the sale area is affected by the governmental regulation or order, the State, at Purchaser's request, shall adjust the total contract price as set forth in paragraph (d) below.
- ii. If 41 percent to 74 percent of the sale area is affected by the governmental regulation or order, the State, at Purchaser's request, shall adjust the total contract price as set forth in paragraph (d) below or terminate the contract. Termination will discharge any unexecuted portion of the contract.
- iii. If 75 percent or more of the sale area is affected by the governmental regulation or order, the State reserves the right to unilaterally terminate the contract and thereby discharge any unexecuted portion thereof. If the State does not exercise this right, the State, at Purchaser's request, shall adjust the total contract price as set forth in paragraph (d) below.

d. Adjustment of Price

When required by clause G-066 (c), the State shall adjust the total contract price by subtracting from the total contract price an amount determined in the following manner: The State shall cause the timber sale area subject to governmental regulation or order to be surveyed. The State shall calculate the percentage of the total sale area subject to the governmental regulation or order. The State shall reduce the total contract price by that calculated percentage, notwithstanding potential variations in species, value, costs, or other items over the total sale area. The State will further reduce the total contract price by the reasonable cost of unamortized roads Purchaser was required to construct but was unable to use for removing timber. A reduction in total contract price terminates all of the Purchaser's rights to and interest in the timber on the affected sale area.

G-070 Limitation on Damage

In the event of a breach of any provision of this contract by the State, the exclusive remedy available to the Purchaser will be limited to a return of the initial deposit, unapplied payments, and credit for unamortized improvements made by Purchaser. The State shall not be liable for any damages, whether direct or consequential.

G-080 Scope of State Advice

No advice by any agent, employee, or representative of the State regarding the method or manner of performing shall constitute a representation or warranty that said method or manner or result thereof will conform to the contract or be suitable for Purchaser's purposes under the contract. Purchaser's reliance on any State advice regarding the method or manner of performance shall not relieve Purchaser of any risk or obligation under the contract. Purchaser retains the final responsibility for its operations under this contract and State shall not be liable for any injuries resulting from Purchaser's reliance on any State advice regarding the method or manner of performance.

G-091 Sale Area Adjustment

The Parties may agree to adjustments in the sale area boundary. The cumulative changes to the sale area during the term of the contract shall not exceed more than four percent of the original sale area. If the sale area is increased, the added forest products become a part of this contract. The State shall determine the volume added and shall calculate the increase to the total contract price using the rates set forth in clause G-101, G-102, or G-103. If the sale area is reduced, the State shall determine the volume to be reduced. The State shall calculate the reduction to the total contract price using the rates set forth in clause G-101, G-102, or G-103.

G-101 Forest Products Not Designated

Any forest products not designated for removal, which must be removed in the course of operations authorized by the State, shall be approved and designated by the Contract Administrator. Added forest products become a part of this contract and the Scribner log scale volume, as defined by the Northwest Log Rules Advisory Group, shall be determined by the Contract Administrator. Added forest products shall be paid for at the following contract payment rates per Mbf Scribner log scale.

The pricing schedule has not been set for the sale.

G-106 Adding Naturally Damaged Forest Products

Any forest products not designated for removal that are seriously damaged by disease, insects or wind, or that may contribute seriously to the spread of insect or disease damage may be added to this sale by the State's contract administrator. Additions must be in unlogged areas of the sale and added volume shall not exceed an amount equal to 10 percent of the original advertised volume. Added forest products become a part of this contract and shall be paid for at the rate set forth in clause G-101, G-102 or G-103.

G-110 Title and Risk of Loss

Title to the forest products conveyed passes at confirmation of the sale. Purchaser bears the risk of loss of or damage to and has an insurable interest in the forest products in this contract from the time of confirmation of the sale of forest products. In the event of loss of or damage to the forest products after passage of title, whether the cause is foreseeable or unforeseeable, the forest products shall be paid for by Purchaser. Breach of this contract shall have no effect on this provision. Title to the forest products not removed from the sale area within the period specified in this contract shall revert to the State as provided in RCW 79.01.132.

G-120 Responsibility for Work

All work, equipment, and materials necessary to perform this contract shall be the responsibility of Purchaser. Any damage to improvements, except as provided in clause G-130 or unless the State issues an operating release pursuant to clause G-280, shall be repaired promptly to the satisfaction of the State and at the Purchaser's expense.

G-130 Exceptions

Exceptions to Purchaser's responsibility in clause G-120 shall be limited exclusively to the following. These exceptions shall not apply where damages occur due to Purchaser's failure to take reasonable precautions or to exercise sound forest engineering and construction practices.

- a. The State shall bear the cost to repair any existing roadway or section of required road completed to the point that an authorization to haul has been issued where such damage was not caused by Purchaser, its employees, agents, or invitees, including independent contractors. Purchaser shall accomplish repairs promptly as required by the State at an agreed price. The State may elect to accomplish repairs by means of State provided resources. This subclause (subclause "a") may only apply if subclause "b" is not in effect.
- b. The parties shall share equally the cost to repair any part of the required roads constructed under this contract which suffer catastrophic damage, except that Purchaser shall be solely responsible for the first \$5,000.00. Catastrophic damage is defined as State identified damage valued in excess of \$5,000.00, resulting from a single event caused by forces beyond the control and without the negligence of Purchaser, such as earthquakes, volcanic eruptions, landslides, and floods. Purchaser shall accomplish repairs promptly as required by the State at an agreed price. The State may elect to accomplish repairs by means of State provided resources; in which event, the Purchaser shall continue to share equally in the cost.

Nothing contained in clauses G-120 and G-130 shall be construed as relieving Purchaser of responsibility for, or damage resulting from, Purchaser's operations or negligence, nor shall Purchaser be relieved from full responsibility for making good any defective work or materials.

G-140 Indemnity

To the fullest extent permitted by law, Purchaser shall indemnify, defend and hold harmless State, agencies of State and all officials, agents and employees of State, from and against all claims arising out of or resulting from the performance of the contract. "Claim" as used in this contract means any financial loss, claim, suit, action, damage, or expense, including but not limited to attorneys' fees, attributable for bodily injury, sickness, disease or death, or injury to or destruction of tangible property including loss of use resulting therefrom. Purchasers' obligation to indemnify, defend, and hold harmless includes any claim by Purchasers' agents, employees, representatives, or any subcontractor or its employees. Purchaser expressly agrees to indemnify, defend, and hold harmless State for any claim arising out of or incident to Purchasers' or any subcontractors' performance or failure to perform the contract. Purchasers' obligation to indemnify, defend, and hold harmless State shall not be eliminated or reduced by any actual or alleged concurrent negligence of State or its agents, agencies, employees and officials. Purchaser waives its immunity under Title 51 RCW to the extent it is required to indemnify, defend and hold harmless State and its agencies, officials, agents or employees.

G-150 Insurance

Purchaser shall, at all times during the term of this contract at its cost and expense, buy and maintain insurance of the types and amounts listed below. Failure to buy and maintain the required insurance may result in a breach and/or termination of the contract at State's option. State may also suspend Purchaser operations until required insurance has been secured.

All insurance and surety bonds should be issued by companies admitted to do business within the State of Washington and have a rating of A-, Class VII or better in the most recently published edition of Best's Reports. Any exception shall be reviewed and approved by the department's risk manager before the insurance coverage is accepted. If an insurer is not admitted, all insurance policies and procedures for issuing the insurance policies must comply with Chapter 48.15 RCW and 284-15 WAC.

The State of Washington, Department of Natural Resources region office of sale origin shall be provided written notice before cancellation or non-renewal of any insurance referred to therein, in accord with the following specifications:

1. Insurers subject to Chapter 48.18 RCW (admitted and regulated by the Insurance Commissioner): The insurer shall give the State 45 days advance notice of cancellation or non-renewal. If cancellation is due to non-payment of premium, the State shall be given 10 days advance notice of cancellation.
2. Insurers subject to Chapter 48.15 RCW (surplus lines): The State shall be given 20 days advance notice of cancellation. If cancellation is due to non-payment of premium, the State shall be given 10 days advance notice of cancellation.

Before starting work, Purchaser shall furnish State of Washington, Department of Natural Resources with a certificate(s) of insurance, executed by a duly authorized representative of each insurer, showing compliance with the insurance requirements specified in the contract.

Purchaser shall include all subcontractors as insured under all required insurance policies, or shall furnish separate certificates of insurance and endorsements for each subcontractor. Subcontractor(s) must comply fully with all insurance requirements stated herein. Failure of subcontractor(s) to comply with insurance requirements does not limit Purchaser's liability or responsibility.

The State of Washington, Department of Natural Resources, its elected and appointed officials, agents and employees shall be named as an additional insured on all general liability, excess, umbrella, and property insurance policies.

All insurance provided in compliance with this contract shall be primary as to any other insurance or self-insurance programs afforded to or maintained by State. Purchaser waives all rights against State for recovery of damages to the extent these damages are covered by general liability or umbrella insurance maintained pursuant to this contract.

If Purchaser is self-insured, evidence of its status as a self-insured entity shall be provided to State. If requested by State, Purchaser must describe its financial condition and the self-insured funding mechanism.

By requiring insurance herein, State does not represent that coverage and limits will be adequate to protect Purchaser, and such coverage and limits shall not limit Purchaser's liability under the indemnities and reimbursements granted to State in this contract.

The limits of insurance, which may be increased by State of Washington, Department of Natural Resources, as deemed necessary, shall not be less than as follows:

Commercial General Liability (CGL) Insurance. Purchaser shall maintain general liability (CGL) insurance, and, if necessary, commercial umbrella insurance with a limit of not less than \$300,000.00 per each occurrence. If such CGL insurance contains aggregate limits, the General Aggregate limit shall be at least twice the "each occurrence" limit. CGL insurance shall have products-completed operations aggregate limit of at least two times the "each occurrence" limit.

CGL insurance shall be written on Insurance Services Office (ISO) occurrence form CG 00 01 (or a substitute form providing equivalent coverage). All insurance shall cover liability arising out of premises, operations, independent contractors, products completed operations, personal injury and advertising injury, and liability assumed under an insured contract (including the tort liability of another party assumed in a business contract), and contain separation of insured (cross liability) condition.

Employer's Liability "Stop Gap" Insurance. Purchaser shall buy employers liability insurance, and, if necessary, commercial umbrella liability insurance with limits not less than \$1,000,000.00 each accident for bodily injury by accident or \$300,000.00 each employee for bodily injury by disease.

Workers' Compensation Coverage. Purchaser shall comply with all State of Washington workers' compensation statutes and regulations. Workers' compensation coverage shall be provided for all employees of Purchaser and employees of any subcontractor or sub-subcontractor. Coverage shall include bodily injury (including death) by accident or disease, which exists out of or in connection with the performance of this contract. Except as prohibited by law, Purchaser waives all rights of subrogation against State for recovery of damages to the extent they are covered by workers' compensation, employer's liability, commercial general liability, or commercial umbrella liability insurance.

If Purchaser, subcontractor or sub-subcontractor fails to comply with all State of Washington workers' compensation statutes and regulations and State incurs fines or is required by law to provide benefits to or obtain coverage for such employees, Purchaser shall indemnify State. Indemnity shall include all fines, payment of benefits to Purchaser or subcontractor employees, or their heirs or legal representatives, and the cost of effecting coverage on behalf of such employees.

Business Auto Policy (BAP). Purchaser shall maintain business auto liability and, if necessary, commercial umbrella liability insurance with a limit not less than \$250,000.00 per accident. Such insurance shall cover liability arising out of "Any Auto". Business auto coverage shall be written on ISO form CA 00 01, or substitute liability form providing equivalent coverage. If necessary the policy shall be endorsed to provide contractual liability coverage and cover a "covered pollution cost or

expense" as provided in the 1990 or later editions of CA 00 01. Purchaser waives all rights against State for the recovery of damages to the extent they are covered by business auto liability or commercial umbrella liability insurance.

G-160 Agents

The State's rights and duties will be exercised by the Region Manager at Chehalis, Washington. The Region Manager will notify Purchaser in writing who is responsible for administering the contract. The Region Manager has sole authority to waive, modify, or amend the terms of this contract in the manner prescribed in clause G-180. No agent, employee, or representative of the State has any authority to bind the State to any affirmation, representation, or warranty concerning the forest products conveyed beyond the terms of this contract.

Purchaser is required to have a person on site during all operations who is authorized to receive instructions and notices from the State. Purchaser shall inform the State in writing who is authorized to receive instructions and notices from the State, and any limits to this person's authority.

G-170 Assignment and Delegation

No rights or interest in this contract shall be assigned by Purchaser without prior written permission of the State. Any attempted assignment shall be void and ineffective for all purposes unless made in conformity with this paragraph. Purchaser may perform any duty through a delegate, but Purchaser is not thereby relieved of any duty to perform or any liability. Any assignee or delegate shall be bound by the terms of the contract in the same manner as the Purchaser.

G-180 Modifications

Waivers, modifications, or amendments of the terms of this contract must be in writing signed by Purchaser and the State.

G-190 Contract Complete

This contract is the final expression of the Parties' agreement. There are no understandings, agreements, or representations, expressed or implied, which are not specified in this contract.

G-200 Notice

Notices required to be given under the following clauses shall be in writing and shall be delivered to the Purchaser's authorized agent or sent by certified mail to the Purchaser's post office address:

- G-210 Violation of Contract
- G-220 State Suspends Operations

All other notices required to be given under this contract shall be in writing and delivered to the authorized agent or mailed to the Party's post office address. Purchaser agrees to notify the State of any change of address.

G-210 Violation of Contract

- a. If Purchaser violates any provision of this contract, the contract administrator, by written notice, may suspend those operations in violation. If the violation is capable of being remedied, the Purchaser has 30 days after receipt of a suspension notice to remedy the violation. If the violation cannot be remedied (such as a violation of WAC 240-15-015) or Purchaser fails to remedy the violation within 30 days after receipt of a suspension notice, the State may terminate the rights of Purchaser under this contract and collect damages.
- b. If the contract expires pursuant to clause G-030 or G-031 without Purchaser having performed all its duties under this contract, Purchaser's right to operate is terminated and Purchaser shall not have the right to remedy the breach. This provision shall not relieve Purchaser of any payment obligations.
- c. The State has the right to remedy the breach in the absence of any indicated attempt by Purchaser or if Purchaser is unable, as determined by the State, to

remedy the breach. Any expense incurred by the State shall be charged to Purchaser and shall be paid within 30 days of receipt of billing.

- d. If Purchaser's violation is a result of a failure to make a payment when due, in addition to a. and b. above, interest shall accrue on the unpaid balance at 12 percent per annum, beginning the date payment was due.

G-220 State Suspends Operation

The Contract Administrator may suspend any operation of Purchaser under this contract when the State is suffering, or there is a reasonable expectation the State will suffer environmental, monetary, or other damage if the operation is allowed to continue.

Purchaser shall be in breach of this contract if the operation continues after the suspension notice or if the operation resumes without prior approval and notice from the Contract Administrator.

Purchaser may request a modification of a suspension within 30 days of the start of suspension through the dispute resolution process in clause G-240. If this process results in a finding that the suspension exceeded the time reasonably necessary to stop or prevent damage to the State, Purchaser is entitled to request a contract term adjustment under clause G-040.

If it reasonably appears that the damage that the State is suffering, or can reasonably be expected to suffer if the operation is allowed to continue, will prevent harvest for a period that will exceed 6 months, and the Purchaser has complied with this contract, the provisions of clause G-066 shall govern just as if the harvest was prevented by an applicable foreign or domestic governmental regulation or order.

G-230 Unauthorized Activity

Any cutting, removal, or damage of forest products by Purchaser, its employees, agents, or invitees, including independent contractors, in a manner inconsistent with the terms of this contract or State law, is unauthorized. Such activity may subject Purchaser to liability for triple the value of said forest products under RCW 79.01.756 or RCW 79.01.760 and may result in prosecution under RCW 79.01.752 or other applicable statutes.

G-240 Dispute Resolution

The following procedures apply in the event of a dispute regarding interpretation or administration of this contract and the parties agree that these procedures must be followed before a lawsuit can be initiated.

- a. In the event of a dispute, Purchaser must make a written request to the Region Manager for resolution prior to seeking other relief.
- b. The Region Manager will issue a written decision on Purchaser's request within ten business days.
- c. Within ten business days of receipt of the Region Manager's decision, Purchaser may make a written request for resolution to the Department of Natural Resources Land Steward.
- d. Unless otherwise agreed, a conference will be held by the Department's Land Steward within 30 calendar days of the receipt of Purchaser's request for review of the Region Manager's written decision. Purchaser and the Region Manager will have an opportunity to present their positions. The Department's Land Steward will issue a decision within a reasonable time of being presented with both Parties' positions.

G-250 Compliance with All Laws

Purchaser shall comply with all applicable statutes, regulations and laws, including, but not limited to, the applicable requirements of WAC 240-15-015 (relating to

prohibitions on export and substitution), WAC 240-15-025 (relating to reporting requirements), and WAC 240-15-030 (relating to enforcement).

G-260 Venue

This contract shall be governed by the laws of the State of Washington. In the event of a lawsuit involving this contract, venue shall be proper only in Thurston County Superior Court.

G-270 Equipment Left on State Land

All equipment owned or in the possession of Purchaser, its employees, agents, or invitees, including independent contractors, shall be removed from the sale area and other State land by the termination date of this contract. Equipment remaining unclaimed on State land 60 days after the expiration of the contract period is subject to disposition as provided by law. Purchaser shall pay to the State all costs of moving, storing, and disposing of such equipment. The State shall not be responsible for any damages to or loss of the equipment or damage caused by the moving, storing or disposal of the equipment.

G-280 Operating Release

An operating release is a written document, signed by the State and the Purchaser, indicating that the Purchaser has been relieved of certain rights or responsibilities with regard to the entire or a portion of the timber sales contract. Purchaser and State may agree to an operating release for this sale, or portion of this sale, prior to the contract expiration, when all contract requirements pertaining to the release area have been satisfactorily completed. Upon issuance of a release, Purchaser's right to cut and remove forest products on the released area will terminate.

G-310 Road Use Authorization

Purchaser is authorized to use the following State roads, and roads for which the State has acquired easements and road use permits; B-Line, B-3000, B-5000, Spur 2, Spur 3, B-0010, and A Line Roads. The State may authorize in writing the use of other roads subject to fees, restrictions, and prior rights.

G-320 Erosion Control

Purchaser shall deliver 50 pounds of grass seed to a location designated by the Contract Administrator. Seed provided shall meet the following specifications.

mixture by weight/Minimum Percent Germination: 50% Red Fescue/90% germination; 25% Perennial Ryegrass/90% germination; 15% Bentgrass/85% germination; 10% White and White Dutch (inoculated) Clover/90% germination.

G-330 Pre-work Conference

Purchaser shall arrange with the Contract Administrator to review this contract and to examine the sale area before beginning any operations. A plan of operations shall be developed and agreed upon by the Contract Administrator and Purchaser before beginning any operations. To the extent that the plan of operations is inconsistent with the contract, the terms of the contract shall prevail. State's acceptance and approval of Purchaser's plan of operations shall not be construed as any statement or warranty that the plan of operations is adequate for Purchaser's purposes or complies with applicable laws.

G-340 Preservation of Markers

Any legal land subdivision survey corners and witness objects are to be preserved. If such are destroyed or disturbed, Purchaser shall have a licensed land surveyor re-establish them.

G-360 Road Use Reservation

The State shall have the right to use, without charge, all existing roads and any road constructed or reconstructed on State lands by Purchaser under this contract. The State may extend such rights to others. If the State grants such rights to others, the State shall require performance or payment, as directed by the State, for their proportionate share of maintenance based on their use.

G-380 Road Easement and Road Use Permit Requirements

Purchaser agrees to comply with the terms and conditions of the attached:

Easement entered into between the State and George W. Ray, dated July 10, 1967;
Easement entered into between the State and Port Blakely Mill Company, dated
October 30, 1964.

G-430 Open Fires

Purchaser shall not set, or allow to be set by Purchaser's employees, agents, invitees
and independent contractors, any open fire at any time of the year without first
obtaining permission, in writing, from the Contract Administrator.

G-450 Encumbrances

This contract and Purchaser's activities are subject to the following:

DATA MISSING

Section P: Payments and Securities**P-010 Initial Deposit**

Purchaser paid \$0.00 initial deposit, which will be maintained pursuant to RCW
79.01.132.

P-020 Payment for Forest Products

Purchaser agrees to pay the total contract price of \$0.00. The total contract price
consists of a \$0.00 contract bid price plus \$48,890.00 in fees. Fees collected shall be
retained by the state unless the contract is adjusted via the G-066 clause.

P-040 Guarantee of Payment

Purchaser will pay for forest products prior to cutting or will guarantee payment by
posting an approved payment security. The amount of cash or payment security shall
be determined by the State and shall equal or exceed the value of the cutting proposed
by Purchaser.

P-050 Billing Procedure

The State will compute and forward to Purchaser statements of charges provided for in
the contract. The Purchaser shall deliver payment to the State on or before the date
shown on the billing statement.

P-080 Payment Account Refund

Advance payments made under P-040 remaining on account above the value for the
charges shall be returned to Purchaser within 30 days following the final report of
charges. Refunds not made within the 30 day period will accrue interest at the interest
rate, as established by WAC 332-100-030, computed on a daily basis until paid.

P-090 Performance Security

Purchaser agrees to furnish, within 30 days of the confirmation date, security
acceptable to the State in the amount of \$0.00. The Security provided shall guarantee
performance of all provisions of this contract and payment of any damages caused by
operations under this contract or resulting from Purchaser's noncompliance with any
rule or law. Acceptable performance security may be in the form of a performance
bond, irrevocable letter of credit, cash or savings account assignments, and must name
the State as the obligee or beneficiary. A letter of credit must comply with Title 62A
RCW, Article 5. Performance security must remain in full force over the duration of
the contract length. Surety bonds issued shall conform to the issuance and rating
requirements in clause G-150. The State shall retain the performance security pursuant
to RCW 79.01.132. Purchaser shall not operate unless the performance security has
been accepted by the State. If at any time the State decides that the security document
or amount has become unsatisfactory, Purchaser agrees to suspend operations and,
within 30 days of notification, to replace the security with one acceptable to the State or
to supplement the amount of the existing security.

P-100 Performance Security Reduction

The State may reduce the performance security after an operating release has been issued if the State determines that adequate security exists for any remaining obligations of Purchaser.

Section H: Harvesting Operations**H-010 Cutting and Yarding Schedule**

Shovel yarding will not be permitted from September 30 to May 1 unless authorized in writing by the Contract Administrator.

H-011 Certification of Fallers and Yarder Operators

All persons engaged in the felling and yarding of timber must receive certification in writing from the Contract Administrator. Certification may be revoked when the Contract Administrator determines that non-compliance of leave tree selection criteria or cut tree selection criteria is occurring, or excessive damage to leave trees or skid trails is occurring.

Excessive damage for leave trees is defined in clause H-012.

Excessive skid trail damage is defined in clause H-013 or H-014.

When leave tree damage exceeds the limits set forth in clause H-012, Purchaser shall be subject to liquidated damages (clause D-032 or D-033).

H-012 Leave Tree Damage Definition

Leave tree damage exists when one or more of the following criteria is satisfied as a result of the Purchaser's operation:

- a. A leave tree has one or more scars on its trunk exposing the cambium layer which in total exceeds 40 square inches.
- b. A leave tree top is broken or the live crown ratio is reduced below 30 percent.
- c. A leave tree has more than 1/3 of the circumference of its root system injured such that the cambium layer is exposed.

Excessive damage is established when more than 5 percent of the leave trees are damaged in a unit (see clause D-032 or D-033). The damaged trees will be identified by the Contract Administrator.

H-013 Skid Trail Requirements

A skid trail is defined as an area that is used for more than three passes by any equipment.

Purchaser shall comply with the following during the yarding operation:

- a. Skid trails will not exceed 20 feet in width, including rub trees.
- b. Skid trails shall not cover more than 10 percent of the total acreage on one unit.
- c. Skid trail location will be pre-approved by the Contract Administrator.
- d. Trees within skid trails shall be felled and yarded prior to the felling of adjacent timber.
- e. Excessive skid trail damage is not permitted. Skid trail damage is considered excessive when more than 10 percent of the active trail has ruts over 4 inches in depth.
- f. Skid trails will be water barred at the time of completion of yarding, if required by the Contract Administrator.

- g. Rub trees along the skid trail shall be left standing until all timber tributary to the skid trail has been removed.

Purchaser shall not deviate from the requirements set forth in this clause without prior written approval from the Contract Administrator.

H-035 Fall Trees Into Sale Area

Purchaser shall fall all trees into the sale area unless otherwise approved by the Contract Administrator.

H-051 Branding and Painting

Purchaser shall provide a State of Washington registered log brand unless the State agrees to furnish the brand. All purchased timber shall be branded in a manner that meets the requirements of WAC 240-15-030(2)(a)(i). All timber purchased under a contract designated as export restricted shall also be painted in a manner that meets the requirements of WAC 240-15-030(2)(a)(ii).

H-080 Snags Not to be Felled

Snags not required to be felled for safety reasons may be left standing.

H-110 Stump Height

Trees shall be cut as close to the ground as practicable. Stump height shall not exceed 12 inches in height measured on the uphill side, or 2 inches above the root collar, whichever is higher.

H-120 Harvesting Equipment

Forest products sold under this contract shall be by cable and shovel logging methods unless authority to use other equipment is granted in writing by the State.

H-130 Hauling Schedule

The hauling of forest products will not be permitted from September 30 to May 1 unless authorized in writing by the Contract Administrator.

H-140 Special Harvest Requirements

Purchaser shall accomplish the following during the harvest operations:

- 1) Purchaser assumes responsibility for any county road use permits and for all costs associated with permits and extra maintenance or repair levied by a county for any county road used by the Purchaser.

- 2) Any and/or all operation(s) of the sale may be temporarily suspended when, in the opinion of the Contract Administrator, there is the possibility of sediment being delivered to any live water.

Permission to do otherwise must be granted in writing by the Contract Administrator.

H-190 Completion of Settings

Operations begun on any setting of the sale area shall be completed before any operation begins on subsequent settings unless authorized in writing by the Contract Administrator.

H-220 Protection of Residual or Adjacent Trees

Unless otherwise specified by this contract, the Contract Administrator shall identify damaged adjacent or leave trees that shall be paid for according to clause G-230.

H-230 Tops and Limbs Outside the Sale Boundary

Tops and limbs outside the sale boundary as a result of Purchaser's operation shall be removed concurrently with the yarding operation unless otherwise directed by the Contract Administrator.

H-250 Fall Non-Merchantable Stems

Within the sale area, all live stems of hardwoods greater than two (2) inches dbh, shall be felled concurrently with felling operations. Areas of young or immature timber may be excluded from this requirement by the Contract Administrator.

H-260 Fall Leaners

Non-merchantable trees that have been pushed over in falling or skidding operations shall be felled.

Section C: Construction and Maintenance**C-040 Road Plan**

Road construction and associated work provisions of the road plan for this sale dated November 01, 2001 are hereby made a part of this contract.

C-050 Purchaser Road Maintenance and Repair

Purchaser shall perform work at their own cost on the B-3000, Spur 2, and Spur 3 Roads to maintain proper drainage and to keep the road surface smooth and crowned. The B-3000, Spur 2, and Spur 3 Roads shall meet the original construction or reconstruction specifications at contract termination.

C-060 Designated Road Maintainer

If required by the State, Purchaser shall perform maintenance and replacement work as directed by the State on the B Line, B-5000, B-0010, and A Line Roads. Purchaser shall furnish a statement in a form satisfactory to the State showing the costs incurred while performing this work. Costs shall be based on the rates set forth in the State's current Equipment Rate Schedule on file at the Region and Olympia offices. The State shall reimburse Purchaser for said costs within 30 days of receipt and approval of the statement.

C-080 Landing Locations Approved Prior to Construction

Landings shall be marked by Purchaser and approved by the Contract Administrator prior to construction.

Section S: Site Preparation and Protection**S-010 Fire Hazardous Conditions**

Purchaser agrees to use its best efforts to minimize the risk of fire.

S-050 Cessation of Operations for Low Humidity

During the "closed season", when the humidity is 30 percent or lower on the sale area, all operations must cease unless authority to continue is granted by the State in writing.

S-060 Pump Truck or Pump Trailer

Purchaser shall provide a fully functional pump truck or pump trailer equipped to meet the specifications of WAC 332-24-005 and WAC 332-24-405 during the "closed season" or as extended by the State and shall provide trained personnel to operate this equipment on the sale area during all operating periods.

S-100 Stream Cleanout

Slash or debris which enters any stream channel as a result of operations under this contract and which is identified by the Contract Administrator shall be removed and deposited in a stable position. Removal of slash or debris shall be accomplished in a manner that avoids damage to the natural stream bed and bank vegetation.

S-110 Resource Protection

No yarding equipment may operate within the Type 5 streams and Riparian Management Zones unless authority is granted in writing by the Contract Administrator.

S-120 Stream Protection

No timber shall be felled into, across, or yarded through live water

S-130 Refuse Disposal

a. Solid and Hazardous Waste Regulatory Compliance.

The Purchaser shall meet applicable local, state, and federal solid and hazardous waste laws and regulations concerning the handling and disposal of hazardous materials and hazardous and solid waste, including, but not limited to, Chapters 70.93, 70.95, and 70.105 RCW and Resource Conservation and Recovery Act of 1976 (RCRA) 42 USC Section 6901, et seq.

b. Waste Disposal.

No hazardous or solid waste shall be disposed of by abandonment, burial, or burning on state land. All wastes, including petroleum stained soil on landings or other areas, shall be removed from state land and be disposed of at a permitted solid or hazardous waste disposal facility.

c. Hazardous Materials Spill Prevention.

All operations shall be conducted in such a manner as to prevent the discharge of hazardous materials, including petroleum products, into water or air or onto ground.

Fuel tanks and other containers of hazardous materials shall be managed to prevent any drips, leaks or larger spills. Equipment seals, pressure lines, and other potential leak sources shall be maintained in good working condition to eliminate oil, hydraulic fluid, and other leaks.

Equipment maintenance activities, such as oil changes, shall be undertaken so that no oil or other hazardous materials reach the ground. Filters, batteries, and other equipment waste shall be deposited in barrels or otherwise temporarily stored so as to prevent the leaking of oil, acid, or other hazardous liquids onto the ground.

d. Spill Reporting.

The operator shall take immediate action to contain and control all spills.

Any spill that may be a threat to human health or the environment shall be reported immediately to the Department of Ecology and the Contract Administrator.

Other spills shall be reported to the Contract Administrator.

Section D: Damages

D-010 Liquidated Damages

The following clauses provide for payments by Purchaser to the State for certain breaches of the terms of this contract. These payments are agreed to as liquidated damages and not as penalties. They are reasonable estimates of anticipated harm to the State which will be caused by Purchaser's breach. These liquidated damages provisions are agreed to by the State and Purchaser with the understanding of the difficulty of proving loss and the inconvenience or infeasibility of obtaining an adequate remedy. These liquidated damages provisions provide greater certainty for the Purchaser by allowing the Purchaser to better assess its responsibilities under the contract.

D-022 Failure to Remove Forest Products

The Purchaser's failure to pay for all or part of the forest products sold in this agreement prior to the expiration of the Purchaser's operating authority results in substantial injury to the State. The value of the forest products sold under this contract is difficult to determine at the date of breach. The Purchaser's failure to perform disrupts the State's management plans, the actual cost of which is difficult to assess. A resale involves additional time and expense and is not an adequate remedy. Therefore,

the Purchaser agrees to pay the State as liquidated damages a sum calculated using the following formula:

$$LD = .35V - ID + C + A$$

Where:

LD = Liquidated Damage value.

V = The value is the unpaid portion of the contract bid price at the time of breach.

ID = Initial Deposit paid at date of contract that has not been applied to timber payments.

C = Charges assessed for contract requirements completed prior to breach of contract but not paid for.

A = Administrative Fee = \$2,500.00.

In no event shall the liquidated damages be less than zero. Interest on the liquidated damage is owed from the date of breach until final payment, calculated using the following formula: $\text{Interest} = r \times LD \times N$.

Where:

r = daily equivalent of an annual interest at current interest rate as established by WAC 332-100-030.

LD = Liquidated damage value.

N = date of breach to time of payment in days.

D-041 Reserve Tree Damage

a. Reserve Trees are trees required and designated for retention within the sale boundary. Purchaser shall protect Reserve Trees from being cut, damaged, or removed during operations. Damage occurs to Reserve Trees when, as a result of purchaser's operations, the Contract Administrator determines one or more of the following has occurred:

One or more trunk scars (exposing the cambium layer) which in total exceeds 40 square inches.

The live crown is reduced by 30 percent of original crown.

One third of the circumference of the root system is damaged such that the cambium layer is exposed.

Removal of designated Reserve Trees from the sale area is unauthorized, and may invoke the use of the G-230 clause. Purchaser is required to leave all original, cut or damaged Reserve Trees on site.

b. If in the course of Purchaser's operations, the Contract Administrator determines that a Reserve Tree has been cut, damaged, or removed, the Purchaser shall provide a replacement Reserve Tree of like condition, size, and species within the sale area, as approved by the Contract Administrator to satisfy Reserve Tree requirements.

c. If the Contract Administrator determines that suitable replacement for a Reserve Tree as described in section (b) of this clause is not possible, the Purchaser agrees to pay the State as Reserve Tree liquidated damages for each Reserve Tree not replaced at the rate of \$500.00.

IN WITNESS WHEREOF, the Parties hereto have entered into this contract.

STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES

Purchaser

Victoria Christiansen
Central Regional Manager

Date: _____
Address: _____

Date: _____

CORPORATE ACKNOWLEDGEMENT

STATE OF _____)
COUNTY OF _____)

On this _____ day of _____, 20____, before me personally
appeared _____
_____ to me known to be the
_____ of the corporation
that executed the within and foregoing instrument and acknowledged said instrument to be the
free and voluntary act and deed of the corporation, for the uses and purposes therein mentioned,
and on oath stated that (he/she was) (they were) authorized to execute said instrument and that
the seal affixed is the corporate seal of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and
year first above written.

Notary Public in and for the State of

My appointment expires _____

Schedule L
HARVESTING SPECIFICATIONS

1. All timber marked with blue paint and/or leave tree boundary tags shall not be considered as sale volume and shall be considered leave trees.
2. Shovel logging shall be in accordance with Shovel Logging Specifications on file at the region office.
3. Lead end suspension required on all settings.
4. Yarding shall be suspended when soil rutting exceeds four (4) inches as measured from natural ground line.
5. Any disturbance greater than that mentioned above shall immediately be water barred by hand, grass seeded, and yarding suspended until such time that the Contract Administrator can be shown that future yarding disturbance(s) will be within contract requirements.
6. Landing debris shall be piled and a fire trail two (2) feet wide shall be constructed to mineral soil around each landing as directed by the Contract Administrator.
7. A detailed felling and yarding plan, approved in writing by the Contract Administrator, shall be required prior to any harvest activities.
8. Any and all snags cut because of safety concerns cannot be removed and must remain where they were felled.
9. Long butts remaining on the sale area must be dispersed as directed by the Contract Administrator.
10. All down timber existing on the day of sale is to remain on the sale area as close as practical to the point of origin.
11. All pre-existing stumps on the day of sale shall be left in the condition that existed at the time of sale and shall not be considered as sale volume.
12. Any yarding and/or loading damage to all roads used by the Purchaser on this sale will be repaired at the Purchaser's expense as directed by the Contract Administrator.

Cruise Narrative

Sale Name: Amber	Region: Central
App. #: 73108	District: Black Hills
Lead cruiser: Derwood D. Duncan	Completion date: 11/08/01
Other cruisers on sale: Marvin Kirner, and Larry Burts	

Unit acreage specifications:

Unit #	Cruised acres	Cruised acres agree with sale acres? Yes/No	If acres do not agree explain why.
1	21	No/Yes	Subtracted road from unit reducing it by .4 of an acre.
2	26	No	Road was taken out of unit.
3	1	No	Added Rock pit to sale.
4	1	No	Added Right of Way to Sale.
Total	49	N/A	N/A

Unit cruise specifications:

Unit #	Sample type (VP, FP, ITS,100%)	Expansion factor (BAF, full/half)	Sighting height (4.5 ft, 16 ft.)	Grid size (Plot spacing or % of area)	Plot ratio (cruise: count)	Total number of plots
1	VP	40.00, Full	4.5	400 x 165	C2, C1	16
2	VP	40.00, Full	4.5	400 X 165	C2, C1	19
3	100%	N/A	4.5	100%	N/A	N/A
4	ITS.	Mixed	4.5	N/A	C.5, C.5	N/A

Sale/Cruise Description:

Minor species cruise intensity:	Cruised all minor species.					
Minimum cruise spec:	Cruised all trees to 40% of D.B.H, or six-inch top.					
Avg ring count by sp:	DF =	8	WH =	N/A	SS =	N/A
Leave/take tree description:	Leave trees were marked with blue paint.					
Other conditions	Rock pit and right of way were added to the sale.					

Field observations:

Road on the south side of units 1 and 2 was subtracted from the unit to save about 47,600 board feet that would have been misrepresented in the volume (1.1 Acres at 43.1 Bdft per Acre). New points could not be found, and old ones were left up. No new traverses points were on the west side of unit 2 next to a clear-cut, and were within 20 feet of the timber with no boundary tags. Right of way boundary tags were not connected to the rock pit.

Grants: 02_____ 42_____

Prepared by:

Title:

CC:

Salename: AMBER	Section: 33	Cruiser: Duncan Kirner Burts
Appl_No: 73108	Township: 18 North	Cruise Date: 11/ 7/01
Unit No: Total Cruise	Range: 4 West , W.M.	Grade Zone: WS (1)
Acres: 51.0		Region: Central

Grade and Grant Summaries
Grade Percentages Based on Species Net Graded Volume

Species	GRADES								GRANTS
	1	2	3	4	5	6	7	8	3
DFSG	-	-	-	2	-	78	20	-	100
WH	-	-	-	-	-	50	48	2	100
SS	-	-	-	-	-	-	100	-	100
RC	-	-	-	-	-	-	74	26	100
RA	-	-	-	-	10	8	66	16	100
								Totals:	100

Salenam: AMBER	Section: 33	Cruiser: Duncan Kirner Burts
Appl_No: 73108	Township: 18 North	Cruise Date: 11/ 7/01
Unit No: 1	Range: 4 West , W.M.	Grade Zone: WS (1)
Acres: 21.0		Region: Central

Grade and Grant Summaries
Grade Percentages Based on Species Net Graded Volume

Species	GRADES								GRANTS
	1	2	3	4	5	6	7	8	3
DFSG	-	-	-	-	-	82	17	1	100
WH	-	-	-	-	-	45	53	2	100
RC	-	-	-	-	-	-	100	-	100
RA	-	-	-	-	16	-	63	21	100
								Totals:	100

Cruise Summary - Scribner Scale

Salename: AMBER
Appl_No: 73108
Unit No: 1
Acres: 21.0

Section: 33
Township: 18 North
Range: 4 West , W.M.

Cruiser: Duncan Kirner Burts
Cruise Date: 11/ 7/01
Grade Zone: WS (1)
Region: Central

Total Plot Count: 16

Species	Count	Cruised	----- C.V. -----		----- SEM -----		SEM
	Trees	TreeCnt	TreeCnt	Ratio	TreeCnt	Ratio	Combined
DFSGG	16	15	109.5	28.7	27.4	7.4	28.4
WHG	85	66	53.1	27.1	13.3	3.3	13.7
RCG	1	1	53.1	27.1	13.3	3.3	99.9
RAG	7	7	166.3	34.8	41.6	13.2	43.6
=====	=====	=====	=====	=====	=====	=====	=====
All	109	89	36.8	28.0	9.2	3.0	9.7

Salename: AMBER	Section: 33	Cruiser: Duncan Kirner Burts
Appl_No: 73108	Township: 18 North	Cruise Date: 11/ 7/01
Unit No: 1	Range: 4 West , W.M.	Grade Zone: WS (1)
Acres: 21.0		Region: Central

Species	Cruised Tree Controls								Constants		Expansion Controls						
	Fp Form		Top-\ \		Segment		D+B	Bark Ratio	Lbs/ Cf	Sample Type	Exp/Ba Factor	Vp		Tree Count	Cr. TreeCount	TreeDibClass	
	Ht \	\	Dia	%	Len	Trim						Size-Ht					
DFSGG(4)	32	74	6	40	32	1.0	0	0.920	52	VP	40.00	F	4	16	15		
WHG (6)	32	77	6	40	32	1.0	0	0.944	52	VP	40.00	F	4	85	66		
RCG (12)	32	68	6	40	32	1.0	0	0.951	48	VP	40.00	F	4	1	1		
RAG (36)	32	74	6	40	32	1.0	0	0.953	46	VP	40.00	F	4	7	7		
														=====	=====		
Plots Counted: 16											Total Trees:		109	89			

Salename: AMBER
Appl_No: 73108
Unit No: 1
Acres: 21.0

Section: 33
Township: 18 North
Range: 4 West , W.M.

Cruiser: Duncan Kirner Burts
Cruise Date: 11/ 7/01
Grade Zone: WS (1)
Region: Central

Rec. No.	Sample Type	Plot No.	Grant	Spp				Top Dib	Fp Ht	Tree Fc	1	2	3	4	5	----- Volume -----						
					D4h	Ht.					(6) Len/G/D	(7) Len/G/D	(8) Len/G/D	(9) Len/G/D	(10) Len/G/D	Bd. Gross	Ft. Net	Cubic Gross	Ft. Net	Expan. Factor	Tr Ct	
1	VP	111	3	36	15.0	1.6	6	32	74		32/7/2	19/8/3				140	110	36	28	42.78	1	
2	VP	111	3	4	24.0	2.3	9	32	74		32/6/1	32/6/0	9/7/1			550	511	119	111	17.83	1	
3	VP	111	3	6	26.0	2.5	10	32	77		32/6/3	32/7/0	16/7/3			770	608	156	125	18.34	1	
4	VP	111	3	6	14.0	1.9	6	32	77		32/7/0	28/7/0				150	150	38	38	63.25	1	
5	VP	111	3	6	11.0	1.7	6	32	77		32/7/0	22/7/1				100	97	23	22	102.46	1	
6	VP	111	3	4	34.0	2.6	13	32	74		32/6/1	32/6/1	19/7/2			1460	1303	264	235	8.88	1	
7	VP	111	3	36	18.0	1.7	7	32	74		32/7/0	22/8/2				230	222	57	54	29.71	1	
8	VP	112	3	6	11.0	.9	6	29	55		28/7/3					30	21	13	9	102.46	1	
9	VP	112	3	4	20.0	2.6	8	32	74		32/7/2	32/6/0	19/7/0			410	364	91	81	25.67	1	
10	VP	112	3	6	15.0	2.3	6	32	77		32/6/0	32/7/0	9/8/0			210	210	51	51	55.10	1	
11	VP	112	3	6	12.0	1.4	6	32	77		32/7/0	12/8/0				100	100	24	24	86.09	1	
12	VP	112	3	6	18.0	2.7	7	32	77		32/6/1	32/7/1	22/7/0			350	319	79	72	38.26	1	
13	VP	112	3	6	12.0	1.2	6	32	77		32/7/2	6/C/0				80	56	20	14	86.09	1	
14	VP	112	3	6	17.0	2.6	6	32	77		32/7/4	32/7/0	19/7/0			300	224	71	55	42.90	1	
15	VP	112	3	6	18.0	2.7	7	32	77		32/6/3	32/7/1	22/7/0			350	281	79	63	38.26	1	
16	VP	112	3	6	17.0	2.5	6	32	77		32/6/1	32/7/0	16/7/0			300	281	70	66	42.90	2	
17	VP	112	3	6	15.0	2.5	6	32	77		32/7/0	32/7/3	16/8/0			230	209	54	49	55.10	1	
18	VP	113	3	6	Tree Count Only Record												8					
19	VP	114	3	6	19.0	2.3	7	32	77		32/6/3	32/7/1	9/C/0			330	242	79	57	34.34	1	
20	VP	114	3	6	14.0	2.5	6	32	77		32/7/0	32/7/0	16/8/0			210	210	47	47	63.25	1	
21	VP	114	3	6	14.0	2.5	6	32	77		32/7/0	32/7/0	16/8/0			210	210	47	47	63.25	1	
22	VP	114	3	6	17.0	2.2	6	32	77		32/6/0	32/7/0	6/8/0			240	240	60	60	42.90	1	
23	VP	114	3	6	24.0	2.7	9	32	77		32/6/3	32/6/1	22/7/1			710	553	146	115	21.52	1	
24	VP	114	3	6	13.0	1.4	6	32	77		32/7/0	12/8/0				100	100	26	26	73.36	1	
25	VP	114	3	6	19.0	2.8	7	32	77		32/6/1	32/6/0	25/7/0			410	387	93	88	34.34	1	
26	VP	115	3	6	18.0	2.7	7	32	77		32/6/0	32/6/1	22/7/3			350	326	79	73	38.26	1	
27	VP	115	3	6	20.0	2.7	8	32	77		32/6/0	32/6/0	22/7/0			460	460	101	101	30.99	1	
28	VP	115	3	6	20.0	2.6	8	32	77		32/6/0	32/6/0	19/7/1			460	456	99	98	30.99	1	
29	VP	115	3	4	27.0	2.6	10	32	74		32/6/0	32/6/0	19/7/0			780	780	159	159	14.08	1	
30	VP	115	3	6	23.0	3.1	9	32	77		32/6/0	32/6/0	32/7/0	3/C/0		700	690	146	144	23.43	1	
31	VP	115	3	6	22.0	2.5	8	32	77		32/6/3	32/6/0	16/7/0			510	414	113	94	25.61	1	
32	VP	115	3	6	23.0	3.0	9	32	77		32/6/3	32/6/0	32/7/2			690	561	144	117	23.43	1	
33	VP	201	3	4	24.0	3.0	9	32	74		32/6/0	32/6/0	32/7/1			690	681	144	141	17.83	1	
34	VP	201	3	4	32.0	3.3	12	32	74		32/6/0	32/6/0	32/6/0	9/7/1		1500	1496	273	272	10.03	1	
35	VP	201	3	4	30.0	3.0	12	32	74		32/6/0	32/6/0	32/7/2			1200	1168	229	221	11.41	1	
36	VP	201	3	6	22.0	2.8	8	32	77		32/6/0	32/6/0	25/7/1			560	555	122	120	25.61	1	
37	VP	201	3	6	11.0	2.0	6	32	77		32/7/0	32/7/0				120	120	26	26	102.46	1	
38	VP	201	3	6	16.0	2.2	6	32	77		32/6/0	32/7/1	6/7/0			230	224	56	54	48.43	1	

Salename: AMBER
Appl_No: 73108
Unit No: 1
Acres: 21.0

Section: 33
Township: 18 North
Range: 4 West , W.M.

Cruiser: Duncan Kirner Burts
Cruise Date: 11/ 7/01
Grade Zone: WS (1)
Region: Central

Rec. No.	Sample Type	Plot No.	Grant	Spp	D4h	Ht.	Top Fp		Tree Fc	1	2	3	4	5	----- Volume -----				Expan. Factor	Tr Ct
							Dib	Ht		(6) Len/G/D	(7) Len/G/D	(8) Len/G/D	(9) Len/G/D	(10) Len/G/D	Bd. Ft. Gross	Ft. Net	Cubic Ft. Gross	Ft. Net		
39	VP	202	3	4	33.0	3.0	13	32	74	32/6/0	32/6/0	32/7/0			1480	1480	275	275	9.43	1
40	VP	202	3	4	29.0	2.8	11	32	74	32/6/0	32/6/1	25/7/1			1030	988	200	190	12.21	1
41	VP	202	3	6	14.0	2.3	6	32	77	32/7/0	32/7/0	9/7/0			190	190	44	44	63.25	1
42	VP	202	3	6	16.0	2.5	6	32	77	32/6/0	32/7/2	16/7/0			250	236	60	56	48.43	1
43	VP	202	3	6	26.0	2.7	10	32	77	32/6/3	32/6/1	22/7/0			840	668	166	134	18.34	1
44	VP	202	3	6	18.0	2.5	7	32	77	32/6/2	32/7/0	16/7/0			340	302	76	67	38.26	1
45	VP	202	3	6	23.0	2.7	9	32	77	32/6/0	32/6/0	22/7/1			610	605	132	130	23.43	1
46	VP	202	3	6	20.0	2.5	8	32	77	32/6/0	32/7/0	16/7/0			450	450	97	97	30.99	1
47	VP	301	3	6	17.0	2.8	6	32	77	32/7/0	32/7/0	25/7/0			340	340	77	77	42.90	1
48	VP	301	3	6	16.0	2.2	6	32	77	32/7/0	32/7/0	6/8/0			230	230	56	56	48.43	1
49	VP	301	3	6	18.0	2.2	7	32	77	32/6/0	32/7/0	6/7/0			270	270	67	67	38.26	1
50	VP	301	3	12	22.0	1.0	8	32	44	32/7/2					70	56	49	39	19.89	1
51	VP	302	3	6	16.0	3.0	6	32	77	32/7/0	32/7/0	32/7/0			300	300	69	69	48.43	1
52	VP	302	3	6	19.0	2.9	7	32	77	32/6/0	32/7/0	28/7/0			420	420	95	95	34.34	1
53	VP	302	3	6	26.0	3.0	10	32	77	32/6/0	32/6/1	32/7/0			920	888	181	175	18.34	1
54	VP	302	3	6	21.0	2.8	8	32	77	32/6/2	32/6/1	25/7/0			530	450	115	99	28.11	1
55	VP	302	3	6	17.0	2.4	6	32	77	32/6/3	32/7/0	12/7/0			290	233	68	56	42.90	1
56	VP	302	3	6	18.0	2.7	7	32	77	32/6/3	32/7/0	22/7/0			350	293	79	66	38.26	1
57	VP	303	3	36	8.0	.5	6	17	75	16/8/1					20	18	5	4	150.41	1
58	VP	303	3	6	Tree Count Only Record															4
59	VP	304	3	6	18.0	2.5	7	32	77	32/6/2	32/7/3	16/7/4			340	254	76	56	38.26	1
60	VP	304	3	6	22.0	2.5	8	32	77	32/6/0	32/7/2	16/7/0			510	478	113	105	25.61	1
61	VP	304	3	6	28.0	2.6	11	32	77	32/6/4	32/7/0	19/7/0			1010	766	193	150	15.81	1
62	VP	304	3	4	10.0	.5	6	17	60	16/8/3					20	14	7	5	102.68	1
63	VP	304	3	36	24.0	2.5	9	32	74	32/5/0	32/8/3	16/C/0			600	503	130	105	16.71	1
64	VP	305	3	6	22.0	3.0	8	32	77	32/6/1	32/6/2	32/7/0			580	510	127	112	25.61	1
65	VP	305	3	6	22.0	3.3	8	32	77	32/6/1	32/6/3	32/7/3	9/C/0		680	533	141	108	25.61	1
66	VP	305	3	6	20.0	2.5	8	32	77	32/6/4	32/7/1	16/7/0			450	324	97	72	30.99	1
67	VP	305	3	6	11.0	2.4	6	32	77	32/7/0	32/7/0	12/7/0			130	130	29	29	102.46	1
68	VP	305	3	6	12.0	2.0	6	32	77	32/7/4	32/7/0				140	104	32	24	86.09	1
69	VP	305	3	6	10.0	2.1	6	32	77	32/7/5	32/7/0	3/8/0			110	80	23	16	123.97	1
70	VP	305	3	6	10.0	2.0	6	32	77	32/7/2	32/8/0				110	98	22	19	123.97	1
71	VP	305	3	6	14.0	2.3	6	32	77	32/7/3	32/7/1	9/7/0			190	148	44	35	63.25	1
72	VP	305	3	6	14.0	2.5	6	32	77	32/7/1	32/7/3	16/C/0			210	157	47	34	63.25	1
73	VP	306	3	36	14.0	1.5	6	32	74	32/7/0	16/8/2				140	136	33	32	49.11	1
74	VP	307	3	6	14.0	2.7	6	32	77	32/7/0	32/7/0	22/7/2			220	214	49	48	63.25	1
75	VP	307	3	4	24.0	2.8	9	32	74	32/6/0	32/6/1	25/7/0			620	601	134	130	17.83	1

Salename: AMBER										Section: 33					Cruiser: Duncan Kirner Burts					
Appl_No: 73108										Township: 18 North					Cruise Date: 11/ 7/01					
Unit No: 1										Range: 4 West , W.M.					Grade Zone: WS (1)					
Acres: 21.0															Region: Central					
															----- Volume -----					
Rec. No.	Sample Type	Plot No.	Grant	Spp	D4h	Ht.	Top Dib	Fp Ht	Tree Fc	1 (6) Len/G/D	2 (7) Len/G/D	3 (8) Len/G/D	4 (9) Len/G/D	5 (10) Len/G/D	Bd. Ft. Gross	Ft. Net	Cubic Ft. Gross	Ft. Net	Expan. Factor	Tr Ct
76	VP	307	3	4	24.0	2.7	9	32	74	32/6/0	32/6/0	22/7/0			610	610	132	132	17.83	1
77	VP	307	3	6	16.0	2.4	6	32	77	32/7/0	32/7/0	12/8/0			240	240	59	59	48.43	1
78	VP	307	3	6	14.0	2.5	6	32	77	32/7/0	32/7/0	16/7/2			210	206	47	46	63.25	1
79	VP	307	3	4	18.0	3.2	7	32	74	32/6/0	32/7/0	32/7/0	6/C/0		410	400	91	89	31.69	1
80	VP	307	3	6	10.0	1.7	6	32	77	32/7/0	22/7/0				90	90	19	19	123.97	1
81	VP	307	3	6	12.0	1.8	6	32	77	32/7/0	25/7/0				120	120	29	29	86.09	1
82	VP	307	3	6	15.0	2.4	6	32	77	32/7/0	32/7/0	12/8/0			220	220	53	53	55.10	1
83	VP	307	3	6	19.0	2.9	7	32	77	32/6/0	32/6/2	28/7/0			420	392	95	89	34.34	1
84	VP	307	3	6	12.0	2.2	6	32	77	32/7/0	32/7/0	6/8/0			150	150	33	33	86.09	1
85	VP	308	3	4	25.0	2.4	10	32	74	32/6/1	32/6/1	12/7/0			660	598	135	122	16.43	1
86	VP	308	3	36	16.0	1.6	6	32	74	32/7/2	19/8/0				160	132	42	35	37.60	1
87	VP	308	3	36	14.0	2.0	6	32	74	32/7/3	32/C/0				170	84	39	18	49.11	1
88	VP	308	3	4	20.0	3.0	8	32	74	32/6/2	32/7/0	32/7/1			440	387	98	86	25.67	1
89	VP	308	3	6	18.0	2.8	7	32	77	32/6/1	32/6/0	25/7/0			350	331	81	77	38.26	1
90	VP	308	3	6	20.0	2.6	8	32	77	32/6/0	32/7/0	19/7/0			460	460	99	99	30.99	1
91	VP	309	3	4	Tree Count Only Record															1
92	VP	309	3	6	Tree Count Only Record															7

END OF CRUISE DATA

Salename: AMBER										Section: 33										Cruiser: Burts Duncan									
Appl_No: 73108										Township: 18 North										Cruise Date: 11/ 6/01									
Unit No: 2										Range: 4 West , W.M.										Grade Zone: WS (1)									
Acres: 27.0																				Region: Central									
		Average Tree				Average Log				Totals										Sample Anal									
		Feet																											
		D4h	of	Gross	Net	Dib	Len	Gross	Net			Gross	Util	Spcl			Spp												
		(In)	Logs	(Board	Feet)	(In)	(Ft)	(Board	Feet)	Trees	Logs	Mbf	Mbf	Cull			Net	%	Sample										
Species																	Mbf	Net	Type SEM										
DFSGG 4		24.0	90	710	659	13.8	29	226	210	381	1198	270	-	-		19	251	251	21	VP 27.0									
WHG 6		14.1	57	194	179	9.1	26	86	80	4962	11123	960	-	-		73	887	887	76	VP 12.8									
RCG 12		9.9	19	34	26	6.7	18	32	24	424	450	14	-	-		3	11	11	1	VP 73.0									
RAG 36		16.1	64	249	192	9.5	25	97	75	121	309	30	-	-		7	23	23	2	VP 58.8									
All		14.8	57	217	199	9.5	26	97	90	5888	13080	1275	-	-		103	1173			8.9									
Percent Total Defect:					8	Per Acre:					218	484	47.2						43.4										

Species	GRADES								GRANTS
	1	2	3	4	5	6	7	8	3
DFSG	-	-	-	4	-	75	21	-	100
WH	-	-	-	-	-	55	43	2	100
RC	-	-	-	-	-	-	70	30	100
RA	-	-	-	-	-	21	72	7	100
Totals:									100

Cruise Summary - Scribner Scale

Salename: AMBER	Section: 33	Cruiser: Burts Duncan
Appl_No: 73108	Township: 18 North	Cruise Date: 11/ 6/01
Unit No: 2	Range: 4 West , W.M.	Grade Zone: WS (1)
Acres: 27.0		Region: Central

Total Plot Count: 19

Species	Count Trees	Cruised TreeCnt	----- C.V. ----- TreeCnt	Ratio	----- SEM ----- TreeCnt	Ratio	SEM Combined
DFSGG	21	16	116.4	16.6	26.7	4.2	27.0
WHG	95	71	52.5	35.8	12.0	4.2	12.8
RCG	4	4	254.3	87.9	58.3	43.9	73.0
RAG	3	3	237.3	38.6	54.4	22.3	58.8
=====	=====	=====	=====	=====	=====	=====	=====
All	123	94	35.8	32.8	8.2	3.4	8.9

Cruise Specifications and Computation Controls

Salename: AMBER	Section: 33	Cruiser: Burts Duncan
Appl_No: 73108	Township: 18 North	Cruise Date: 11/ 6/01
Unit No: 2	Range: 4 West , W.M.	Grade Zone: WS (1)
Acres: 27.0		Region: Central

Westside Grading Rules Used For All Species

Species	Cruised Tree Controls							Constants		Expansion Controls					
	Fp	Form	Top-\	\	Segment	D+B		Bark	Lbs/	Sample	Exp/Ba	Vp	Tree	Cr.	TreeDib
	Ht \	\	Dia	%	Len	Trim	%	Ratio	Cf	Type	Factor	Size-Ht	Count	Count	Class
DFSGG(4)	32	75	6	40	32	1.0	0	0.920	52	VP	40.00	F 4	21	16	
WHG (6)	32	77	6	40	32	1.0	0	0.944	52	VP	40.00	F 4	95	71	
RCG (12)	32	68	6	40	32	1.0	0	0.951	48	VP	40.00	F 4	4	4	
RAG (36)	32	74	6	40	32	1.0	0	0.953	46	VP	40.00	F 4	3	3	
													=====	=====	
													Total Trees:	123	94
													Plots Counted: 19		

Salename: AMBER										Section: 33					Cruiser: Burts Duncan					
Appl_No: 73108										Township: 18 North					Cruise Date: 11/ 6/01					
Unit No: 2										Range: 4 West , W.M.					Grade Zone: WS (1)					
Acres: 27.0															Region: Central					
Rec. No.	Sample Type	Plot No.	Grant	Spp	D4h Ht.		Top Fp Dib Ht		Tree Fc	1	2	3	4	5	----- Volume -----					
										(6) Len/G/D	(7) Len/G/D	(8) Len/G/D	(9) Len/G/D	(10) Len/G/D	Bd. Gross	Ft. Net	Cubic Gross	Ft. Net	Expan. Factor	Tr Ct
3	VP	101	3	4	25.0	3.3	10	32	75	32/6/1	32/6/0	32/7/0	9/C/0		880	807	170	156	21.89	1
4	VP	101	3	6	12.0	1.2	6	32	77	32/7/1	6/C/0				80	63	20	16	96.84	1
5	VP	101	3	6	8.0	.5	6	17	75	16/C/0					20	0	5	0	217.89	1
6	VP	101	3	6	8.0	.5	6	17	75	16/8/0					20	20	5	5	217.89	1
7	VP	101	3	4	25.0	3.0	10	32	75	32/6/2	32/6/2	32/7/0			830	688	162	136	21.89	1
8	VP	101	3	4	34.0	2.5	13	32	75	32/6/0	32/6/3	16/7/0			1450	1321	260	234	11.83	1
9	VP	101	3	4	35.0	2.6	14	32	75	32/6/0	32/6/0	19/7/0			1620	1620	286	286	11.17	1
10	VP	102	3	6	11.0	1.2	6	32	77	32/7/0	6/C/0				80	70	18	16	115.25	1
11	VP	102	3	6	18.0	2.8	7	32	77	32/6/0	32/7/0	25/7/0			350	350	81	81	43.04	1
12	VP	102	3	6	19.0	2.8	7	32	77	32/6/0	32/6/0	25/7/1			410	406	93	92	38.63	1
13	VP	102	3	36	27.0	2.7	10	32	74	32/6/3	32/7/3	22/8/3			840	588	171	119	14.30	1
14	VP	103	3	12	8.0	.5	6	17	75	16/8/0					20	20	5	5	162.85	1
15	VP	103	3	6	Tree Count Only Record															5
16	VP	103	3	4	23.0	2.7	9	32	75	32/6/1	32/6/1	22/7/2			610	544	128	114	25.86	1
17	VP	104	3	6	10.0	.7	6	23	60	22/8/0					30	30	9	9	139.45	1
18	VP	104	3	4	22.0	2.7	8	32	75	32/4/0	32/6/0	22/7/1			520	516	113	112	28.26	1
19	VP	104	3	6	14.0	2.7	6	32	77	32/7/0	32/7/0	22/7/3			220	211	49	47	71.15	1
20	VP	104	3	6	9.0	1.2	6	32	77	32/7/3	6/C/0				60	35	11	7	172.16	1
21	VP	104	3	6	13.0	1.3	6	32	77	32/7/2	9/8/0				100	82	25	21	82.52	1
22	VP	104	3	6	10.0	.5	6	17	60	16/8/0					20	20	7	7	139.45	1
23	VP	104	3	6	12.0	1.2	6	32	77	32/7/1	6/C/0				80	63	20	16	96.84	1
24	VP	104	3	6	18.0	2.8	7	32	77	32/6/0	32/6/0	25/7/1			350	346	81	80	43.04	1
25	VP	105	3	6	11.0	1.4	6	32	77	32/7/0	12/8/0				80	80	20	20	115.25	1
26	VP	105	3	4	28.0	3.2	11	32	75	32/6/0	32/6/0	32/7/3	6/C/0		1110	1042	209	192	17.45	1
27	VP	105	3	6	15.0	2.8	6	32	77	32/6/1	32/7/0	25/7/2			260	240	60	55	61.98	1
28	VP	105	3	6	8.0	.5	6	17	75	16/C/0					20	0	5	0	217.89	1
29	VP	105	3	6	10.0	1.6	6	32	77	32/7/0	19/8/0				80	80	18	18	139.45	1
30	VP	105	3	4	23.0	2.8	9	32	75	32/6/2	32/6/3	25/7/0			620	489	130	103	25.86	1
31	VP	105	3	4	21.0	2.7	8	32	75	32/7/0	32/6/2	22/7/3			480	436	104	93	31.02	1
32	VP	106	3	6	Tree Count Only Record															5
33	VP	107	3	12	8.0	.5	6	17	75	16/C/0					20	0	5	0	162.85	1
34	VP	107	3	36	14.0	2.6	6	32	74	32/7/1	32/7/0	19/8/2			210	194	48	44	53.17	1
35	VP	108	3	6	13.0	1.3	6	32	77	32/7/1	9/C/0				100	81	25	20	82.52	1
36	VP	108	3	6	20.0	2.9	8	32	77	32/6/3	32/6/5	28/7/2			490	316	108	70	34.86	1
37	VP	108	3	6	13.0	1.1	6	32	77	32/7/2	3/C/0				90	72	23	18	82.52	1
38	VP	108	3	6	8.0	.5	6	17	75	16/8/0					20	20	5	5	217.89	1
39	VP	108	3	6	13.0	2.2	6	32	77	32/7/2	32/7/6	6/C/0			150	92	35	23	82.52	1

Salename: AMBER
Appl_No: 73108
Unit No: 2
Acres: 27.0

Section: 33
Township: 18 North
Range: 4 West , W.M.

Cruiser: Burts Duncan
Cruise Date: 11/ 6/01
Grade Zone: WS (1)
Region: Central

Rec. No.	Sample Type	Plot No.	Grant	Spp	D4h Ht.		Top Dib	Fp Ht	Tree Fc	1	2	3	4	5	----- Volume -----					
										(6) Len/G/D	(7) Len/G/D	(8) Len/G/D	(9) Len/G/D	(10) Len/G/D	Bd. Gross	Ft. Net	Cubic Gross	Ft. Net	Expan. Factor	Tr Ct
40	VP	108	3	4	24.0	2.8	9	32	75	32/6/1	32/6/1	25/7/0			620	564	134	123	23.75	1
41	VP	108	3	6	14.0	2.8	6	32	77	32/7/0	32/7/0	25/7/1			220	217	50	49	71.15	1
42	VP	108	3	4	14.0	2.8	6	32	75	32/7/0	32/7/0	25/7/1			220	217	50	49	69.79	1
43	VP	108	3	4	24.0	2.4	9	32	75	32/6/0	32/6/2	12/7/0			560	528	121	113	23.75	1
44	VP	109	3	6	Tree Count Only Record															3
45	VP	109	3	4	Tree Count Only Record															1
46	VP	109	3	36	14.0	1.2	6	32	74	32/7/3	6/C/0				130	84	29	18	53.17	1
47	VP	110	3	6	18.0	2.4	7	32	77	32/6/1	32/7/0	12/8/0			300	281	72	68	43.04	1
48	VP	110	3	6	16.0	2.0	6	32	77	32/6/3	32/7/5				210	137	52	32	54.47	1
49	VP	110	3	6	14.0	2.0	6	32	77	32/7/0	32/7/3				170	155	39	35	71.15	1
50	VP	110	3	6	23.0	2.6	9	32	77	32/6/1	32/6/1	19/7/3			610	539	129	114	26.36	1
51	VP	201	3	6	17.0	2.5	6	32	77	32/6/0	32/7/0	16/7/0			300	300	70	70	48.25	1
52	VP	201	3	6	20.0	3.0	8	32	77	32/6/0	32/6/0	32/7/0			510	510	110	110	34.86	1
53	VP	201	3	6	22.0	3.0	8	32	77	32/6/0	32/6/0	32/7/0			580	580	127	127	28.81	1
54	VP	201	3	6	11.0	2.2	6	32	77	32/7/0	32/7/0	6/C/0			130	120	27	26	115.25	1
55	VP	201	3	6	21.0	2.7	8	32	77	32/6/0	32/6/1	22/7/0			520	504	113	109	31.62	1
56	VP	201	3	6	22.0	2.8	8	32	77	32/6/0	32/6/1	25/7/1			560	536	122	116	28.81	1
57	VP	201	3	6	18.0	2.7	7	32	77	32/6/1	32/7/2	22/7/3			350	295	79	67	43.04	1
58	VP	201	3	6	20.0	2.8	8	32	77	32/6/0	32/7/0	25/7/1			490	485	106	104	34.86	1
59	VP	201	3	6	22.0	2.5	8	32	77	32/6/2	32/6/0	16/7/0			510	446	113	100	28.81	1
60	VP	201	3	4	38.0	2.8	15	32	75	32/6/0	32/6/1	25/7/0			2050	1983	349	337	9.47	1
61	VP	202	3	6	9.0	1.5	6	32	77	32/7/0	16/7/0				70	70	14	14	172.16	1
62	VP	202	3	6	19.0	2.8	7	32	77	32/6/0	32/7/0	25/7/2			410	402	93	90	38.63	1
63	VP	202	3	6	18.0	2.7	7	32	77	32/6/0	32/7/0	22/7/0			350	350	79	79	43.04	1
64	VP	202	3	6	19.0	3.0	7	32	77	32/6/0	32/6/0	32/7/0			430	430	97	97	38.63	1
65	VP	202	3	6	16.0	2.5	6	32	77	32/6/0	32/7/2	16/7/3			250	230	60	55	54.47	1
66	VP	202	3	6	20.0	2.8	8	32	77	32/6/0	32/7/0	25/7/0			490	490	106	106	34.86	1
67	VP	202	3	6	19.0	2.7	7	32	77	32/6/0	32/7/2	22/7/3			410	370	91	82	38.63	1
68	VP	203	3	6	Tree Count Only Record															4
69	VP	203	3	4	Tree Count Only Record															1
70	VP	204	3	6	25.0	2.7	10	32	77	32/6/0	32/6/0	22/7/1			790	782	158	156	22.31	1
71	VP	204	3	6	20.0	2.3	8	32	77	32/6/0	32/7/0	9/7/0			410	410	91	91	34.86	1
72	VP	204	3	6	18.0	2.7	7	32	77	32/6/0	32/7/2	22/7/3			350	314	79	71	43.04	1
73	VP	204	3	6	21.0	2.8	8	32	77	32/6/0	32/6/1	25/7/2			530	504	115	108	31.62	1
74	VP	204	3	6	26.0	2.7	10	32	77	32/6/0	32/6/0	22/7/2			840	824	166	162	20.63	1
75	VP	204	3	6	17.0	2.8	6	32	77	32/6/0	32/7/0	25/7/0			340	340	77	77	48.25	1
76	VP	204	3	6	16.0	2.5	6	32	77	32/6/0	32/7/0	16/7/0			250	250	60	60	54.47	1
77	VP	204	3	6	14.0	2.2	6	32	77	32/7/0	32/7/1	6/C/0			190	174	43	40	71.15	1

Salename: AMBER
Appl_No: 73108
Unit No: 2
Acres: 27.0

Section: 33
Township: 18 North
Range: 4 West , W.M.

Cruiser: Burts Duncan
Cruise Date: 11/ 6/01
Grade Zone: WS (1)
Region: Central

Rec. No.	Sample Type	Plot No.	Grant	Spp	D4h	Ht.	Top Dib	Fp Ht	Tree Fc	1	2	3	4	5	Volume					Tr Ct
										(6) Len/G/D	(7) Len/G/D	(8) Len/G/D	(9) Len/G/D	(10) Len/G/D	Bd. Ft. Gross	Ft. Net	Cubic Ft. Gross	Ft. Net	Expan. Factor	
78	VP	204	3	6	15.0	2.5	6	32	77	32/6/0	32/7/0	16/7/0			230	230	54	54	61.98	1
79	VP	204	3	6	17.0	2.7	6	32	77	32/6/0	32/7/0	22/7/0			340	340	75	75	48.25	1
80	VP	204	3	6	17.0	2.5	6	32	77	32/6/0	32/7/0	16/7/0			300	300	70	70	48.25	1
81	VP	204	3	6	23.0	2.5	9	32	77	32/6/1	32/6/2	16/7/1			570	497	124	108	26.36	1
82	VP	205	3	6	16.0	2.7	6	32	77	32/6/0	32/7/0	22/7/1			280	277	65	64	54.47	1
83	VP	205	3	6	21.0	2.8	8	32	77	32/6/1	32/6/0	25/7/1			530	493	115	107	31.62	1
84	VP	205	3	6	17.0	2.7	6	32	77	32/6/0	32/7/0	22/7/2			340	334	75	73	48.25	1
85	VP	205	3	6	21.0	2.8	8	32	77	32/6/0	32/6/0	25/7/0			530	530	115	115	31.62	1
86	VP	205	3	6	14.0	2.2	6	32	77	32/7/0	32/7/0	6/C/0			190	180	43	41	71.15	1
87	VP	206	3	6	Tree Count Only Record															3
88	VP	206	3	12	20.0	1.5	8	32	68	32/7/0	16/7/0				220	220	60	60	26.06	1
89	VP	206	3	12	12.0	.7	6	23	50	22/7/1					30	27	12	11	72.38	1
90	VP	206	3	4	26.0	3.0	10	32	75	32/6/0	32/6/0	32/7/0			880	880	172	172	20.24	1
91	VP	206	3	4	24.0	2.5	9	32	75	32/6/0	32/7/2	16/7/5			600	542	127	112	23.75	1
92	VP	207	3	6	20.0	3.0	8	32	77	32/6/0	32/6/2	32/7/1			510	471	110	101	34.86	1
93	VP	207	3	6	20.0	3.0	8	32	77	32/6/0	32/6/0	32/7/2			510	496	110	106	34.86	1
94	VP	207	3	6	13.0	2.0	6	32	77	32/7/0	32/7/3				140	125	34	30	82.52	1
95	VP	207	3	6	21.0	3.0	8	32	77	32/6/1	32/6/1	32/7/0			580	529	123	113	31.62	1
96	VP	207	3	4	30.0	3.5	12	32	75	32/6/0	32/6/1	32/7/0	16/7/2		1460	1396	263	252	15.20	1
97	VP	208	3	6	15.0	3.0	6	32	77	32/6/0	32/7/2	32/7/1			280	257	63	58	61.98	1
98	VP	208	3	6	14.0	2.5	6	32	77	32/7/0	32/7/0	16/7/0			210	210	47	47	71.15	1
99	VP	208	3	6	12.0	1.5	6	32	77	32/7/0	16/7/0				110	110	26	26	96.84	1
100	VP	208	3	6	19.0	3.0	7	32	77	32/6/0	32/6/0	32/7/2			430	418	97	94	38.63	1
101	VP	208	3	6	16.0	2.3	6	32	77	32/7/1	32/C/0	9/C/0			240	144	58	32	54.47	1
102	VP	208	3	6	16.0	2.8	6	32	77	32/6/0	32/7/0	25/7/1			280	277	66	65	54.47	1
103	VP	208	3	6	15.0	2.7	6	32	77	32/6/0	32/7/0	22/7/0			240	240	56	56	61.98	1
104	VP	209	3	4	Tree Count Only Record															3
105	VP	209	3	6	Tree Count Only Record															4

END OF CRUISE DATA

Cruise Summary - Scribner Scale

Salename: AMBER	Section: 5	Cruiser: DD, MK, and LB
Appl_No: 73108	Township: 17 North	Cruise Date: 11/ 8/01
Unit No: 3	Range: 4 West , W.M.	Grade Zone: WS (1)
Acres: 2.0		Region: Central

SaleName: AMBER	Section: 5	Cruiser: DD, MK, and LB
Appl_No: 73108	Township: 17 North	Cruise Date: 11/ 8/01
Unit No: 3	Range: 4 West , W.M.	Grade Zone: WS (1)
Acres: 2.0		Region: Central

Species	Cruised Tree Controls								Constants		Expansion Controls					
	Fp Form		Top-\ \		Segment		D+B	Bark Ratio	Lbs/Cf	Sample Type	Exp/Ba Factor	Vp Size-Ht	Tree Count	Cr. TreeDib CountClass		
	Ht \	\	Dia	%	Len	Trim										
DFS GG(4)	32	73	6	40	32	1.0	0	0.920	52	10	0%	1.00	0	18	18	
WHG (6)	32	76	6	40	32	1.0	0	0.944	52	10	0%	1.00	0	71	71	
SSG (10)	32	67	6	40	32	1.0	0	0.962	50	10	0%	1.00	0	1	1	
RAG (36)	32	70	6	40	32	1.0	0	0.953	46	10	0%	1.00	0	13	13	
												=====	=====			
												Total Trees:	103	103		
Plots Counted: 1																

Washington State
Department of Natural Resources
Cruise Tree Measurements - Scribner Scale

Salename: AMBER										Section: 5					Cruiser: DD, MK, and LB				
Appl_No: 73108										Township: 17 North					Cruise Date: 11/ 8/01				
Unit No: 3										Range: 4 West , W.M.					Grade Zone: WS (1)				
Acres: 2.0															Region: Central				
Rec. No.	Sample Type	Plot No.	Grant	Spp	D4h Ht.		Top Fp Dib Ht		Tree Fc	1	2	3	4	5	----- Volume -----				Tr Ct
										(6)	(7)	(8)	(9)	(10)	Bd. Gross	Ft. Net	Cubic Gross	Ft. Net	
1	100%	1	3	6	12.0	1.7	6	32	76	32/7/0	22/8/0				120	120	28	28	1.00 1
2	100%	1	3	6	12.0	2.0	6	32	76	32/7/0	32/7/0				140	140	32	32	1.00 1
3	100%	1	3	6	9.0	.7	6	23	67	22/8/0					30	30	8	8	1.00 1
4	100%	1	3	6	12.0	2.0	6	32	76	32/7/0	32/7/3				140	125	32	28	1.00 1
5	100%	1	3	6	14.0	2.2	6	32	76	32/7/0	32/7/0	6/C/0			190	180	43	41	1.00 1
6	100%	1	3	6	15.0	2.7	6	32	76	32/7/0	32/7/0	22/7/3			240	231	56	54	1.00 1
7	100%	1	3	6	15.0	2.5	6	32	76	32/7/0	32/7/2	16/8/3			230	210	54	49	1.00 1
8	100%	1	3	6	14.0	2.3	6	32	76	32/7/0	32/7/2	9/C/0			190	168	44	38	1.00 1
9	100%	1	3	6	14.0	2.5	6	32	76	32/7/0	32/7/0	16/8/0			200	200	46	46	1.00 1
10	100%	1	3	6	8.0	.5	6	17	75	16/8/0					20	20	5	5	1.00 1
11	100%	1	3	6	10.0	.8	6	26	60	25/7/0					30	30	11	11	1.00 1
12	100%	1	3	6	15.0	2.8	6	32	76	32/7/2	32/7/0	25/7/2			240	206	57	49	1.00 1
13	100%	1	3	6	13.0	2.2	6	32	76	32/7/0	32/7/2	6/C/0			150	130	35	32	1.00 1
14	100%	1	3	6	14.0	2.7	6	32	76	32/7/1	32/7/0	22/7/3			220	199	49	44	1.00 1
15	100%	1	3	6	12.0	1.9	6	32	76	32/7/0	28/7/2				120	114	30	28	1.00 1
16	100%	1	3	6	20.0	2.3	8	32	76	32/7/0	32/7/1	9/C/0			410	388	91	83	1.00 1
17	100%	1	3	6	14.0	2.4	6	32	76	32/7/0	32/7/0	12/8/0			190	190	44	44	1.00 1
18	100%	1	3	6	13.0	.7	6	23	46	22/8/3					30	21	14	10	1.00 1
19	100%	1	3	6	25.0	2.5	10	32	76	32/6/3	32/6/0	16/7/3			680	533	142	113	1.00 1
20	100%	1	3	6	21.0	2.3	8	32	76	32/6/0	32/7/0	9/8/0			410	410	94	94	1.00 1
21	100%	1	3	4	17.0	2.5	6	32	73	32/6/0	32/7/0	16/8/3			270	264	66	64	1.00 1
22	100%	1	3	36	9.0	.5	6	17	67	16/C/0					20	0	6	0	1.00 1
23	100%	1	3	36	13.0	1.5	6	32	70	32/7/0	16/8/0				90	90	25	25	1.00 1
24	100%	1	3	6	14.0	1.2	6	32	76	32/7/0	6/C/0				130	120	29	26	1.00 1
25	100%	1	3	36	12.0	1.3	6	32	70	32/7/0	9/8/0				80	80	21	21	1.00 1
26	100%	1	3	36	9.0	.6	6	20	67	19/8/0					20	20	7	7	1.00 1
27	100%	1	3	4	12.0	1.1	6	32	73	32/7/2	3/C/0				70	56	19	14	1.00 1
28	100%	1	3	4	10.0	.7	6	23	60	22/8/0					30	30	9	9	1.00 1
29	100%	1	3	6	22.0	1.8	8	32	76	32/7/1	25/7/2				370	328	88	76	1.00 1
30	100%	1	3	6	13.0	1.7	6	32	76	32/7/1	22/7/2				120	105	30	26	1.00 1
31	100%	1	3	6	17.0	2.2	6	32	76	32/7/3	32/7/0	6/C/0			240	182	60	47	1.00 1
32	100%	1	3	6	15.0	2.2	6	32	76	32/7/3	32/7/0	6/C/0			210	158	50	39	1.00 1
33	100%	1	3	6	12.0	.9	6	29	50	28/7/2					30	24	15	12	1.00 1
34	100%	1	3	6	14.0	2.3	6	32	76	32/7/4	32/7/4	9/C/0			190	108	44	25	1.00 1
35	100%	1	3	6	14.0	1.5	6	32	76	32/7/0	16/8/0				140	140	33	33	1.00 1
36	100%	1	3	4	17.0	2.6	6	32	73	32/6/0	32/7/0	19/7/3			270	264	67	65	1.00 1
37	100%	1	3	6	10.0	1.2	6	32	76	32/7/2	6/C/0				70	48	15	10	1.00 1
38	100%	1	3	6	8.0	.5	6	17	75	16/8/0					20	20	5	5	1.00 1
39	100%	1	3	6	8.0	.5	6	17	75	16/C/0					20	0	5	0	1.00 1
40	100%	1	3	4	32.0	2.5	12	32	73	32/6/0	32/6/0	16/7/3			1200	1176	225	219	1.00 1
41	100%	1	3	6	22.0	2.3	8	32	76	32/6/0	32/7/0	9/C/0			470	460	106	101	1.00 1
42	100%	1	3	36	11.0	.6	6	20	55	19/8/0					20	20	10	10	1.00 1
43	100%	1	3	36	10.0	.6	6	20	60	19/8/0					20	20	8	8	1.00 1
44	100%	1	3	36	9.0	.6	6	20	67	19/8/0					20	20	7	7	1.00 1

Salename: AMBER										Section: 5					Cruiser: DD, MK, and LB					
Appl_No: 73108										Township: 17 North					Cruise Date: 11/ 8/01					
Unit No: 3										Range: 4 West , W.M.					Grade Zone: WS (1)					
Acres: 2.0															Region: Central					
Rec. No.	Sample Type	Plot No.	Grant	Spp			Top Dib	Fp Ht	Tree Fc	1	2	3	4	5	----- Volume -----					
					D4h	Ht.				(6)	(7)	(8)	(9)	(10)	Bd. Gross	Ft. Net	Cubic Gross	Ft. Net	Expan. Factor	Tr Ct
45	100%	1	3	36	11.0	.8	6	26	55	25/7/0					30	30	12	12	1.00	
46	100%	1	3	4	8.0	.5	6	17	75	16/C/0					20	0	5	0	1.00	1
47	100%	1	3	4	38.0	2.3	15	32	73	32/6/0	32/6/3	9/C/0			1610	1401	292	248	1.00	1
48	100%	1	3	36	15.0	.7	6	23	40	22/7/2					30	24	19	15	1.00	1
49	100%	1	3	36	8.0	.5	6	17	75	16/C/0					20	0	5	0	1.00	1
50	100%	1	3	36	9.0	.6	6	20	67	19/8/0					20	20	7	7	1.00	1
51	100%	1	3	6	13.0	1.4	6	32	76	32/7/0	12/8/0				100	100	26	26	1.00	1
52	100%	1	3	36	19.0	.7	7	23	40	22/7/2					40	32	30	24	1.00	1
53	100%	1	3	6	13.0	2.0	6	32	76	32/7/0	32/7/0				140	140	34	34	1.00	3
54	100%	1	3	6	12.0	2.0	6	32	76	32/7/0	32/7/0				140	140	32	32	1.00	1
55	100%	1	3	6	8.0	1.0	6	32	76	32/8/0					50	50	9	9	1.00	1
56	100%	1	3	6	16.0	2.5	6	32	76	32/6/0	32/7/0	16/7/0			250	250	60	60	1.00	1
57	100%	1	3	6	14.0	2.5	6	32	76	32/7/0	32/7/0	16/7/0			200	200	46	46	1.00	2
58	100%	1	3	6	16.0	2.7	6	32	76	32/6/2	32/7/0	22/7/0			280	248	65	58	1.00	2
59	100%	1	3	6	20.0	2.7	8	32	76	32/6/0	32/7/0	22/7/0			460	460	101	101	1.00	1
60	100%	1	3	6	17.0	2.8	6	32	76	32/6/2	32/7/0	25/7/2			310	272	73	63	1.00	1
61	100%	1	3	6	11.0	2.0	6	32	76	32/7/0	32/7/0				120	120	26	26	1.00	1
62	100%	1	3	6	20.0	2.8	8	32	76	32/6/3	32/6/1	25/7/1			470	367	102	81	1.00	1
63	100%	1	3	6	20.0	2.5	8	32	76	32/6/1	32/7/1	16/7/2			450	402	97	87	1.00	1
64	100%	1	3	6	15.0	2.5	6	32	76	32/6/0	32/7/0	16/7/0			230	230	54	54	1.00	1
65	100%	1	3	6	18.0	2.7	7	32	76	32/6/0	32/7/0	22/7/0			350	350	79	79	1.00	1
66	100%	1	3	6	17.0	2.8	6	32	76	32/6/1	32/7/2	25/7/1			310	267	73	63	1.00	1
67	100%	1	3	6	10.0	1.7	6	32	76	32/7/0	22/7/0				90	90	19	19	1.00	1
68	100%	1	3	6	8.0	.7	6	23	75	22/7/0					30	30	6	6	1.00	1
69	100%	1	3	4	16.0	2.7	6	32	73	32/6/0	32/7/0	22/7/0			240	240	58	58	1.00	1
70	100%	1	3	4	30.0	2.5	12	32	73	32/6/0	32/7/0	16/7/0			1010	1010	196	196	1.00	1
71	100%	1	3	4	26.0	2.5	10	32	73	32/6/0	32/6/1	16/7/0			680	661	142	137	1.00	1
72	100%	1	3	6	10.0	.9	6	29	60	28/7/0					30	30	12	12	1.00	1
73	100%	1	3	6	11.0	1.3	6	32	76	32/7/2	9/7/0				80	66	19	16	1.00	1
74	100%	1	3	6	26.0	2.7	10	32	76	32/6/2	32/7/1	22/7/1			840	708	166	141	1.00	1
75	100%	1	3	4	24.0	2.7	9	32	73	32/6/0	32/6/0	22/7/1			610	605	132	130	1.00	2
76	100%	1	3	6	8.0	.7	6	23	75	22/7/0					30	30	6	6	1.00	1
77	100%	1	3	6	22.0	3.0	8	32	76	32/6/0	32/6/0	32/7/3			580	559	127	120	1.00	1
78	100%	1	3	6	15.0	2.6	6	32	76	32/6/0	32/7/0	19/7/2			230	226	55	54	1.00	1
79	100%	1	3	6	22.0	2.6	8	32	76	32/6/1	32/7/1	19/C/0			520	432	115	92	1.00	1
80	100%	1	3	4	28.0	2.5	11	32	73	32/6/0	32/6/1	16/7/0			860	837	169	164	1.00	1
81	100%	1	3	6	10.0	1.2	6	32	76	32/7/0	6/8/0				70	70	15	15	1.00	1
82	100%	1	3	10	12.0	.5	6	17	50	16/7/2					20	16	10	8	1.00	1
83	100%	1	3	4	10.0	1.0	6	32	68	32/7/2					50	40	12	10	1.00	1
84	100%	1	3	4	18.0	2.5	7	32	73	32/6/0	32/7/0	16/7/0			310	310	74	74	1.00	1
85	100%	1	3	4	32.0	2.2	32	32	73	32/6/1	32/7/2	6/7/0			2340	2003	293	254	1.00	1
86	100%	1	3	6	32.0	2.3	1	32	76	32/6/1	32/7/0	9/7/1			930	849	200	186	1.00	1
87	100%	1	3	6	10.0	1.0	6	32	68	32/7/0					50	50	12	12	1.00	2
88	100%	1	3	6	12.0	.8	6	26	50	25/7/0					30	30	13	13	1.00	1

Salename: AMBER	Section: 5	Cruiser: DD, MK, and LB
Appl_No: 73108	Township: 17 North	Cruise Date: 11/ 8/01
Unit No: 3	Range: 4 West , W.M.	Grade Zone: WS (1)
Acres: 2.0		Region: Central

Grade and Grant Summaries
Grade Percentages Based on Species Net Graded Volume

Species	GRADES								GRANTS
	1	2	3	4	5	6	7	8	3
DFSG	-	-	-	-	-	68	32	-	100
WH	-	-	-	-	-	39	59	2	100
SS	-	-	-	-	-	-	100	-	100
RA	-	-	-	-	-	-	60	40	100
								Totals:	100

Salename: AMBER										Section: 5					Cruiser: DD, MK, and LB					
Appl_No: 73108										Township: 17 North					Cruise Date: 11/ 8/01					
Unit No: 3										Range: 4 West , W.M.					Grade Zone: WS (1)					
Acres: 2.0															Region: Central					
															----- Volume -----					
Rec. No.	Sample Type	Plot No.	Grant	Spp			Top Fp		Tree Fc	1	2	3	4	5	Bd. Ft.		Cubic Ft.		Expan. Factor	Tr Ct
					D4h	Ht.	Dib	Ht		(6) Len/G/D	(7) Len/G/D	(8) Len/G/D	(9) Len/G/D	(10) Len/G/D	Gross	Net	Gross	Net		
89	100%	1	3	6	15.0	2.3	6	32	76	32/7/3	32/7/0	9/7/0			210	168	51	42	1.00	1
90	100%	1	3	6	17.0	2.5	6	32	76	32/6/0	32/7/0	16/7/1			270	268	66	65	1.00	1
91	100%	1	3	6	8.0	.5	6	17	75	16/8/0					20	20	5	5	1.00	1
92	100%	1	3	6	9.0	1.0	6	32	76	32/7/0					50	50	10	10	1.00	1
93	100%	1	3	6	9.0	.5	6	17	67	16/8/0					20	20	6	6	1.00	1
94	100%	1	3	6	16.0	2.3	6	32	76	32/6/3	32/7/0	9/7/1			240	191	58	47	1.00	1
95	100%	1	3	4	25.0	2.7	10	32	73	32/6/0	32/6/1	22/7/1			740	709	148	141	1.00	1
96	100%	1	3	36	10.0	.5	6	17	60	16/8/0					20	20	8	8	1.00	1
97	100%	1	3	4	32.0	2.0	12	32	73	32/7/0	32/7/0				910	910	190	190	1.00	1

END OF CRUISE DATA

Salename: AMBER R/W										Section: 5				Cruiser: DD 111 L.B.							
Appl_No: 73108										Township: 17 North				Cruise Date: 11/ 9/01							
Unit No: 4										Range: 4 West , W.M.				Grade Zone: WS (1)							
Acres: 1.0										Region: Central											
Average Tree					Average Log				Totals										Sample Anal		
Species	D4h (In)	Feet of Logs	Gross (Board)	Net (Feet)	Dib (In)	Len (Ft)	Gross (Board)	Net (Feet)	Trees	Logs	Gross Mbf	Util Mbf	Spcl Cull Mbf	Cull Mbf	Net Mbf	Spp Net Mbf	% Net	Sample Type	SEM		
DFSGG 4	22.6	73	472	424	12.7	28	182	163	11	29	5	-	-	1	5	5	19	ITS	18.5		
WHG 6	16.5	60	255	240	10.2	27	117	110	82	179	21	-	-	1	20	20	79	ITS	13.8		
RCG 12	18.7	32	136	136	10.0	27	113	113	5	6	1	-	-	-	1	1	3	ITS	0.0		
All	17.4	60	273	256	10.6	27	125	117	98	214	27	-	-	2	25				11.4		
Percent Total Defect: 6					Per Acre:					98	214	26.8	25.1								

Species	GRADES								GRANTS
	1	2	3	4	5	6	7	8	3
DFSG	-	-	-	-	-	92	8	-	100
WH	-	-	-	-	-	64	36	-	100
RC	-	-	-	-	-	-	97	3	100
Totals:									100

Cruise Summary - Scribner Scale

Salename: AMBER R/W
Appl_No: 73108
Unit No: 4
Acres: 1.0

Section: 5
Township: 17 North
Range: 4 West , W.M.

Cruiser: DD 111 L.B.
Cruise Date: 11/ 9/01
Grade Zone: WS (1)
Region: Central

Cruise Specifications and Computation Controls

Salename: AMBER R/W	Section: 5	Cruiser: DD 111 L.B.
Appl_No: 73108	Township: 17 North	Cruise Date: 11/ 9/01
Unit No: 4	Range: 4 West , W.M.	Grade Zone: WS (1)
Acres: 1.0		Region: Central

Westside Grading Rules Used For All Species

Species	Cruised Tree Controls							Constants		Expansion Controls					
	Fp	Form	Top-\ \		Segment		D+B	Bark	Lbs/	Sample	Exp/Ba	Vp	Tree	Cr.	TreeDib
	Ht \	\	Dia	%	Len	Trim	%								
DFSGG(4)	32	74	6	40	32	1.0	0	0.920	52	IT S	2.20	0	5	5	
WHG (6)	32	76	6	40	32	1.0	0	0.944	52	IT S	2.16	0	38	38	
RCG (12)	32	68	6	40	32	1.0	0	0.951	48	IT S	1.00	0	5	5	
													=====	=====	
													Total Trees:	48	48
													Plots Counted: 1		

Salename: AMBER R/W										Section: 5					Cruiser: DD 111 L.B.						
Appl_No: 73108										Township: 17 North					Cruise Date: 11/ 9/01						
Unit No: 4										Range: 4 West , W.M.					Grade Zone: WS (1)						
Acres: 1.0															Region: Central						
Rec. No.	Sample Type	Plot No.	Grant	Spp	D4h	Ht.	Top Dib	Fp Ht	Tree Fc	1	2	3	4	5	Volume						
										(6)	(7)	(8)	(9)	(10)	Bd. Gross	Ft. Net	Cubic Gross	Ft. Net	Expan. Factor	Tr Ct	
1	ITS	1	3	6	12.0	1.0	6	32	57	32/7/3						50	35	17	12	2.16	
2	ITS	1	3	6	20.0	2.0	8	32	76	32/6/2	32/7/0					350	294	82	71	2.16	1
3	ITS	1	3	6	10.0	1.0	6	32	68	32/7/0						50	50	12	12	2.16	1
4	ITS	1	3	6	15.0	1.7	6	32	76	32/7/0	22/7/0					170	170	41	41	2.16	1
5	ITS	1	3	6	11.0	1.0	6	32	62	32/7/1						50	45	15	14	2.16	1
6	ITS	1	3	6	21.0	2.6	8	32	76	32/6/0	32/7/0	19/7/2				480	472	105	103	2.16	1
7	ITS	1	3	6	22.0	2.6	8	32	76	32/6/1	32/6/1	19/7/0				520	472	115	104	2.16	1
8	ITS	1	3	6	16.0	2.3	6	32	76	32/6/0	32/7/0	9/7/0				240	240	58	58	2.16	1
9	ITS	1	3	6	14.0	1.7	6	32	76	32/7/2	22/C/0					150	96	35	21	2.16	1
10	ITS	1	3	6	16.0	2.5	6	32	76	32/6/0	32/7/0	16/7/0				250	250	60	60	2.16	2
11	ITS	1	3	6	14.0	1.5	6	32	76	32/7/0	16/7/0					140	140	33	33	2.16	1
12	ITS	1	3	6	8.0	1.0	6	32	76	32/7/0						50	50	9	9	2.16	2
13	ITS	1	3	6	22.0	2.5	8	32	76	32/6/0	32/6/0	16/7/0				510	510	113	113	2.16	1
14	ITS	1	3	6	16.0	2.5	6	32	76	32/6/3	32/7/1	16/7/0				250	195	60	47	2.16	1
15	ITS	1	3	6	11.0	1.2	6	32	76	32/7/0	6/8/0					80	80	18	18	2.16	1
16	ITS	1	3	6	19.0	2.7	7	32	76	32/6/0	32/7/0	22/7/0				410	410	91	91	2.16	1
17	ITS	1	3	6	15.0	2.0	6	32	76	32/7/3	32/7/1					190	143	46	36	2.16	1
18	ITS	1	3	4	24.0	2.5	9	32	74	32/6/1	32/6/0	16/7/0				570	533	124	117	2.20	1
19	ITS	1	3	6	13.0	2.0	6	32	76	32/7/0	32/7/0					140	140	34	34	2.16	1
20	ITS	1	3	6	26.0	2.7	10	32	76	32/6/1	32/6/0	22/7/2				840	776	166	153	2.16	2
21	ITS	1	3	4	24.0	2.5	9	32	74	32/6/1	32/6/1	16/7/0				570	517	124	113	2.20	1
22	ITS	1	3	4	23.0	2.7	9	32	74	32/6/0	32/6/0	22/7/0				560	560	122	122	2.20	1
23	ITS	1	3	6	15.0	2.0	6	32	76	32/7/1	32/7/0					190	176	46	43	2.16	1
24	ITS	1	3	12	17.0	1.0	6	32	45	32/7/0						50	50	28	28	1.00	1
25	ITS	1	3	6	16.0	2.0	6	32	76	32/7/0	32/7/0					210	210	52	52	2.16	1
26	ITS	1	3	6	9.0	1.2	6	32	76	32/7/0	6/8/0					60	60	11	11	2.16	1
27	ITS	1	3	6	20.0	2.5	8	32	76	32/6/0	32/6/0	16/7/0				450	450	97	97	2.16	1
28	ITS	1	3	6	10.0	1.5	6	32	76	32/7/0	16/7/0					80	80	18	18	2.16	2
29	ITS	1	3	12	8.0	.5	6	17	75	16/8/0						20	20	5	5	1.00	1
30	ITS	1	3	12	19.0	1.0	7	32	44	32/7/0						60	60	38	38	1.00	1
31	ITS	1	3	6	20.0	2.5	8	32	76	32/6/1	32/6/0	16/7/0				450	422	97	92	2.16	1
32	ITS	1	3	12	16.0	1.0	6	32	45	32/7/0						50	50	25	25	1.00	1
33	ITS	1	3	6	10.0	1.2	6	32	76	32/7/1	6/8/0					70	64	15	14	2.16	1
34	ITS	1	3	6	12.0	1.5	6	32	76	32/7/0	16/7/0					90	90	23	23	2.16	1
35	ITS	1	3	6	18.0	2.5	7	32	76	32/6/0	32/7/0	16/7/0				340	340	76	76	2.16	1
36	ITS	1	3	4	17.0	1.0	6	32	45	32/C/0						50	0	28	0	2.20	1
37	ITS	1	3	6	22.0	2.0	8	32	76	32/6/1	32/7/1					390	351	94	84	2.16	1
38	ITS	1	3	6	24.0	2.3	9	32	76	32/6/0	32/6/0	9/7/0				610	610	129	129	2.16	1
39	ITS	1	3	6	12.0	.7	6	23	50	22/7/0						30	30	13	13	2.16	1
40	ITS	1	3	6	14.0	1.0	6	32	49	32/7/0						50	50	21	21	2.16	1
41	ITS	1	3	6	20.0	2.0	8	32	76	32/6/1	32/7/2					350	308	82	72	2.16	1
42	ITS	1	3	6	15.0	1.7	6	32	76	32/7/0	22/7/0					170	170	41	41	2.16	1
43	ITS	1	3	4	24.0	2.7	9	32	74	32/6/2	32/6/1	22/7/1				610	512	132	112	2.20	1
44	ITS	1	3	12	28.0	1.5	11	32	68	32/7/0	16/7/0					500	500	116	116	1.00	1

END OF CRUISE DATA

STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES
CENTRAL REGION

AMBER

ROAD PLAN

SECTION 22, 27, 32, TOWNSHIP 18 NORTH, RANGE 04 WEST, W.M.
SECTION 5 TOWNSHIP 17 NORTH, RANGE 4 WEST, W.M.
THURSTON COUNTY

BLACK HILLS DISTRICT

AGREEMENT NO.: 30-073108

CONTRACT ADMINISTRATOR: Jim JeJeune

DATE: 11/01/2001

STAFF ENGINEER: Terry Orton

APPROVED BY: _____

DRAWN & COMPILED BY: Alicia Compton

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SECTION 0 - SCOPE OF PROJECT

This project includes but is not limited to optional construction including:

- clearing;
- grubbing;
- right-of-way debris disposal;
- excavation and/or embankment to subgrade;
- acquisition and installation of drainage structures;
- acquisition, manufacture, and application of rock;
- grass seeding.

This project also includes but is not limited to reconstruction and optional reconstruction including:

- brushing right-of-way;
- clearing existing excavation and embankment slopes;
- grubbing existing excavation and embankment slopes;
- right-of-way debris disposal;
- landing construction;
- constructing ditches;
- acquisition and installation of additional drainage structures;
- grading and shaping reconstructed subgrade;
- widening road segments;
- constructing additional turnouts;
- compaction of road surface;
- acquisition, manufacture, and application of rock;
- grass seeding.

SECTION 1 - GENERAL CLAUSES

1.1-1
Clauses in this plan apply to all construction or reconstruction including landings unless otherwise noted.

1.1-2
Reconstruction of the following roads is required. All roads shall be reconstructed on the State's location and in accordance with this Road Plan.

<u>Road</u>	<u>Stations</u>	<u>Type</u>
B-Line	MP 4.10	Reconstruction
B-3000	0+00 to 47+27	(culvert replacement) Reconstruction

1.1-3
Construction or reconstruction of the following roads is not required. Roads used by the Purchaser shall be constructed or reconstructed on the State's location and in accordance with this Road Plan.

<u>Road</u>	<u>Stations</u>	<u>Type</u>
Spur 2	0+00 to 8+60	Reconstruction
Spur 3	0+00 to 2+25	Construction

1.1-4
If the Purchaser desires a road location or design change, a revised Road Plan shall be submitted to the State for consideration.

1.1-5
On this plan quantities are minimum acceptable values. Additional quantities required by the State because of hidden conditions or Purchaser's choice of construction season or techniques shall be at the Purchaser's expense. Hidden conditions include, but are not limited to: solid subsurface rock, subsurface springs, saturated ground, and unstable soil.

1.2-1

The construction or reconstruction of any roads specified herein shall not be permitted between September 30 and May 1 unless authority to do so is granted, in writing, by the Contract Administrator.

1.2-2

Purchaser shall not use roads constructed or reconstructed under this Road Plan for hauling, other than timber cut on the right-of-way, without written approval from the Contract Administrator.

1.2.1-1

Pioneering shall not extend past construction that will be completed during the current construction season. Drainage shall be provided on all uncompleted construction as approved, in writing, by the Contract Administrator.

Clearing and grubbing shall be completed prior to starting excavation and embankment.

Culvert placement in live streams shall precede embankment where culverts are to be placed along natural ground.

Culverts shall be installed in completed subgrade as construction progresses.

Subgrade, ditches, and culvert installations shall be completed and are subject to written approval by the Contract Administrator prior to rock application.

1.3-1A

Hauling shall be suspended when wheel track rutting exceeds 6 inches unless Purchaser elects to correct the situation at his/her own expense. Corrective measures and continued operations are subject to written approval by the Contract Administrator.

1.4-3

Reference points (R.P.'s) that are moved or damaged at any time during construction shall be reset in their original locations by the Purchaser. Excavation and embankment shall not proceed on road segments controlled by said R.P.'s until all moved or damaged R.P.'s are reset.

1.5-1

Maintenance on roads listed in Contract Clauses C-50 (Purchaser Road Maintenance and Repair) and C-60 (Designated Road Maintainer) shall be performed in accordance with Forest Access Road Maintenance Specifications.

1.5-3

Snowplowing shall not be permitted unless authorized, in writing, by the Contract Administrator.

SECTION 2 - CLEARING

2.1-1

Fell all vegetative material larger than 2 inches DBH or over 5 feet high between the marked right-of-way boundaries or if not marked in the field, between clearing limits specified on TYPICAL SECTION SHEET.

SECTION 3 - GRUBBING

3-1

All stumps shall be removed that fall between grubbing limits shown on the TYPICAL SECTION SHEET. Those outside the grubbing limits but with undercut roots shall also be removed.

3-2

Grubbing limits are defined as the entire area between the external limits shown on the TYPICAL SECTION SHEET.

SECTION 4 - DEBRIS DISPOSAL AND REMOVAL

- 4.1-1
Right-of-way debris is defined as all nonmerchantable vegetative material larger than one cubic foot in volume within the grubbing limits.
- 4.1-2
All right-of-way debris disposal shall be completed prior to the application of rock
- 4.2.3-3
Right-of-way debris shall not be placed against standing timber.
- 4.2.3-4
Right-of-way debris shall be scattered outside the grubbing limits.
- 4.3-1
On the following roads, vegetative material including limbs up to 3 inches in diameter shall be cut and removed to 5 feet beyond the back of the ditch and 5 feet beyond the outer edge of the subgrade and to a height of 14 feet above the road surface as shown on the BRUSHING SECTION DETAIL. Vegetative material shall be cut as near flush with the ground as possible, but shall not extend more than 3 inches above the ground.

<u>Road</u>	<u>Stations</u>
B-3000	0+00 to 47+27
Spur 2	0+00 to 8+60

SECTION 5 - EXCAVATION

- 5.1-1
Roads shall be constructed or reconstructed in accordance with dimensions shown on the TYPICAL SECTION SHEET.
- 5.1-1B
On the following roads, the existing subgrade shall be widened to the dimensions shown on the TYPICAL SECTION SHEET.

<u>Road</u>	<u>Stations</u>
B-3000	0+00 to 47+27
Spur 2	0+00 to 8+60

- 5.1-3
Road grade and alignment shall conform to the State's marked location. Grade and alignment shall have smooth continuity without abrupt changes in direction. Maximum grades are: 18 percent favorable and 12 percent adverse. Minimum radius curve is 60 feet.
- 5.1-4
Minimum extra widening on the inside of curves shall be:
- | | |
|--------------|-----------------------------|
| 5 feet extra | 80 to 100 foot radius curve |
| 7 feet extra | 60 to 80 foot radius curve |
- 5.1-5
Curve widening, where required, shall be added to the inside of curves.
- 5.1-7
Roads shall be constructed or reconstructed to the dimensions shown on the TYPICAL SECTION SHEET, within the tolerance listed below. Tolerance classes for each road are listed on the TYPICAL SECTION SHEET.

Tolerance Class	A	B	C
Road Width (feet)	+1.5	+1.5	+2.0
Subgrade elevation (feet +/-)	0.5	1.0	2.0
Centerline alignment (feet lt./rt.)	1.0	1.5	3.0

5.1-8

Excavation slopes shall be constructed no steeper than shown on the following table:

<u>Material Type</u>	<u>Excavation Slope Ratio</u>
Common Earth (on side slopes of 55%)	1:1
Common Earth (55% to 70% sideslopes)	¾:1
Common Earth (on slopes over 70%)	½:1
Fractured or loose rock	½:1
Hardpan or solid rock.....	¼:1

5.1-8B

On the following roads, Purchaser shall reconstruct excavation slopes to provide sufficient width for ditches and road surface. Excavated slopes shall be consistent with Clause 5.1-8.

<u>Road</u>	<u>Stations</u>
B-3000	0+00 to 47+27
Spur 2	0+00 to 8+60

5.1-8G

On the following roads, Purchaser shall construct ditches. Ditch material shall be used to build up the subgrade.

<u>Road</u>	<u>Stations</u>
B-3000	0+00 to 47+27
Spur 2	0+00 to 8+60

5.1-9

Excavation and embankment slopes shall be constructed to a uniform line and left rough for easier revegetation.

5.1-10

Embankments shall be widened as follows:

<u>Height at Centerline</u>	<u>Subgrade Widening</u>
Less than 6 feet	2 feet
6 feet or over	4 feet

5.1-11

Embankment slopes shall be constructed no steeper than shown on the following table:

<u>Material Type</u>	<u>Embankment Slope Ratio</u>
Common Earth and Rounded Gravel	1½:1
Angular Rock	1¼:1
Sandy Soils.	2:1

5.1-12

Organic material shall be excluded from embankment.

5.1-15B

Waste material may be deposited adjacent to the road prism on side slopes up to 45 percent if the waste material is compacted and more than 100 feet away from live streams. On side slopes between 45 and 55 percent, all excavation not needed for embankment shall be end hauled or pushed to designated embankment sites. On side slopes of 55 percent or more, all excavation shall be end hauled or pushed to designated embankment sites. All waste embankments shall be compacted in layers not exceeding 2 feet.

5.1-15C

When constructing landings, waste material shall not be placed on side slopes steeper than 45%.

5.1-16B

The amount of material to be contained in a waste area shall be at the discretion of the Contract Administrator.

5.1-16C

On the following road, all excavated material not suitable for embankment, as directed by the Contract Administrator, shall be end hauled to designated waste areas.

End Haul/Waste Material Disposal

<u>Road</u>	<u>Stations</u>	<u>Waste Area Location</u>	<u>Remarks</u>
B-Line	MP 4.10	B-4010 @ MP 1.20	Use material for select borrow as directed by Contract Administrator.

5.1-18

Select borrow shall contain no more than 5% clay, vegetative debris, or other waste material by volume.

5.1-19

Select borrow shall be used at the following location:

<u>Road</u>	<u>Stations</u>	<u>Source</u>
B-Line	MP 4.10	Existing fill and MP 1.20 of B-4010 Rd

5.1-21

Waste material shall not be deposited within 50 feet of a cross drain culvert installation.

5.1-23

Turnout locations noted on this plan are approximate. Locations shall be adjusted to fit with final subgrade alignment and sight distances. Location shall be subject to written approval of the Contract Administrator.

5.1-25

Turnarounds shall be no larger than 30 feet long and 30 feet wide. Location shall be subject to written approval of the Contract Administrator.

5.2-1

Road pioneering operations shall not undercut the final cut slope, deposit excavated material outside the grubbing limits, or restrict drainage.

5.3-1

All embankment and waste material shall be compacted. The minimum acceptable compaction is achieved by placing embankments in 2 foot or shallower lifts and routing excavation equipment over entire width of the lifts

5.3-2B

On the following road, all embankment shall be compacted full width in 12 inch lifts by three coverages with a vibratory drum roller weighing at least 14,000 pounds at a maximum operating speed of 3 mph. For embankment segments too narrow to accommodate a drum roller, a plate compactor shall be used. With a plate compactor three full coverages shall be made in 8 inch lifts.

<u>Road</u>	<u>Stations</u>
B-Line	MP 4.10

5.4-1

Silt-bearing runoff shall not be permitted to go into streams.

5.4-2

Accomplish sediment removal through silt traps, silt fences, settling ponds, or other methods as approved, in writing, by the Contract Administrator.

5.4-2D

On the following roads, accomplish sediment removal through settling ponds as illustrated on the SETTLING POND DETAIL. Purchaser shall clean out settling pond as directed by the Contract Administrator.

<u>Road</u>	<u>Stations</u>	<u>Remarks</u>
B-Line	MP 4.10	Single pond as shown on CULVERT INSTALLATION DETAIL

5.4-3A

On the following roads, Purchaser shall furnish and evenly spread the seed mixture listed below on all exposed soil inside the grubbing limits at a rate of 40 pounds per acre. The date of application is subject to approval by the Contract Administrator.

<u>Mixture Percent by Weight</u>	<u>Minimum Percent Germination</u>
50% Fescue, Red	90% Germination
25% Ryegrass, Perennial	90% Germination
15% Bentgrass	85% Germination
10% Clover, White and White Dutch (inoculated)	90% Germination

Weed seed shall not exceed 0.5% by weight.

Seed shall be furnished in standard containers on which the following shall be shown:

1. Common name of seed
2. Net weight
3. Percent of purity
4. Percentage of germination
5. Percentage of weed seed and inert material

Required seed not spread by the termination of this contract shall become property of the State. The amount owed to the State shall be as follows, less the amount spread.

<u>Road</u>	<u>Stations</u>	<u>Seed Quantity (lbs)</u>
B-Line	MP 4.10	20
B-4010	MP 1.20 (waste area)	10
B-3000	0+00 to 47+27	260
Spur 2	0+00 to 8+60	45
Spur 3	0+00 to 2+25	15

5.5-4

Constructed or reconstructed subgrades shall be compacted full width except ditch prior to rock application. Compaction shall be by a smooth-drum vibratory roller weighing at least 14,000 pounds. Four complete passes shall be made at a maximum operating speed of 3 mph.

5.5-5

Finished subgrade shall be crowned as shown on the TYPICAL SECTION SHEET, and shall be uniform, firm, rut-free, and shaped to ensure surface runoff in an even, unconcentrated manner.

SECTION 6 - DRAINAGE

6.2.1-1B

Purchaser shall furnish, install, and maintain corrugated polyethylene pipe (AASHTO specification No. M-294 Type S) and on culverts over 24 inches, aluminized culverts (meeting ASTM A 819, AASHTO M-274 aluminized steel Type 2 and AASHTO M-36 specifications) as designated on the CULVERT LIST. Culvert and flume lengths shall be varied to fit as-built conditions subject to written approval by the Contract Administrator.

6.2.1-2

Annular corrugated bands and culvert ends shall be used on metal culverts. Manufacturer's approved connectors shall be used for corrugated polyethylene pipe.

6.2.1-5

On required roads: culverts, downspouts, flumes, bands, and gaskets as listed on the CULVERT LIST which are not installed shall become property of the State.

6.2.1-5B

Purchaser shall provide rubberized gaskets for all culverts with a vertical rise greater than 42 inches.

- 6.2.2.1-1
Culvert, downspout, flume, and energy dissipator installation shall be in accordance with CULVERT AND DRAINAGE SPECIFICATION DETAIL and the manufacturer's installation instructions.
- 6.2.2.3-1
Cross drains and surface culverts on road grades in excess of 3% shall be skewed at least 30 degrees from perpendicular to the road centerline, except that cross drain culverts at the low points of dips in roads shall not be skewed.
- 6.2.2.3-2
Cross drain culverts shall be installed at a slope steeper than the incoming ditch grade, but not less than 3% nor more than 10%.
- 6.2.2.4-1
Installations of culverts 30 inches in diameter and over shall be subject to written approval by the Region Engineer or their designee prior to making backfill.
- 6.2.2.4-1B
On the following road, installation of culvert shall be in accordance with Hydraulics Project Approval, CULVERT INSTALLATION DETAIL, LIVE STREAM CULVERT REMOVAL PROCEDURE, and the FILL REMOVAL DETAIL.

<u>Road</u>	<u>Stations</u>
B-Line	MP 4.10

- 6.2.2.5-1
Drainage structure outfalls shall not terminate directly on unprotected soil that will erode. Downspouts, flumes, and energy dissipators shall be installed to prevent erosion.
- 6.3-1
Ditches shall be constructed concurrently with construction of the subgrade. Ditches shall drain to culverts, ditchouts, and natural drainages.
- 6.3-2B
On all reconstructed roads, the construction and reshaping of ditches, and the installation of culverts shall be completed prior to the application of rock and shall be done in accordance with the TYPICAL SECTION SHEET and CULVERT AND DRAINAGE SPECIFICATION DETAIL.
- 6.4-1
Catch basins shall be constructed to resist erosion in accordance with CULVERT AND DRAINAGE SPECIFICATION DETAIL. Minimum dimensions: two feet wide and four feet long with backslopes consistent with Clause 5.1-8: Excavation Slopes.
- 6.5-1
Headwalls shall be constructed in accordance with CULVERT AND DRAINAGE SPECIFICATION DETAIL at all cross drain culverts.

SECTION 7 - ROCK

7.1-1

Rock for construction and/or reconstruction under this contract may be obtained from sources on State land as listed below at no charge to the Purchaser. Development and use shall be in accordance with a written "Development Plan" prepared by the State and available upon request at the Central Region Office (Five Forks Quarry or Upper Lytle Quarry) or prepared by the Purchaser as directed by the Region Engineer or their designee (Buck Ridge Quarry). Upon completion of operations, the rock source shall be left in the condition specified in said plan, subject to approval by the Contract Administrator. Use of material from any other source must have prior written approval from the Contract Administrator. If other operators are using or desire to use these rock sources, joint operating plans shall be developed. All parties shall follow these plans.

<u>Source</u>	<u>Location</u>
Five Forks Quarry	Sec. 22, T18N, R04W, W.M.
Buck Ridge Quarry	Sec. 5, T17N, R04W, W.M.
Upper Lytle Quarry	Sec. 24, T17N, R05W, W.M.

7.1-1A

Rock for culvert fill material shall be obtained from an existing stockpile on State land as listed below at no charge to the Purchaser. Purchaser shall remove no more than 110 cubic yards of 1 1/2 FOOT MINUS rock. Additional rock may be purchased at a cost of \$10.00 per cubic yard subject to written approval of the Contract Administrator.

<u>Source</u>	<u>Location</u>
Waddell Basalt Quarry Stockpile	SE ¼ Sec. 21, T17N, R03W, W.M.

7.1-3

All rock source operations shall be conducted as directed by the Contract Administrator and in accordance with an approved development plan to be furnished by the Purchaser or on file at the Central Region office.

7.2.1-4

Rock shall meet the following specifications for gradation and quality when placed in hauling vehicles. The exact point of evaluation for conformance to specifications will be determined by the Contract Administrator.

7.2.1.1-3

1½ INCH MINUS CRUSHED ROCK

% passing 1½" square sieve	100%
% passing 1" square sieve.....	70 - 90%
% passing ¾" square sieve	50 - 80%
% passing ¼" square sieve	30 - 50%
% passing U.S. #40 sieve.....	3 - 18%
% passing U.S. #200 sieve.....	7.5% Max

All percentages are by weight.
The portion of ballast retained on ¼ inch sieve shall not contain more than 0.1 percent vegetative debris or trash.

7.2.1.1-6B

3 INCH MINUS CRUSHED ROCK

% passing 3" square sieve.....	100%
% passing 2" square sieve.....	65 - 95%
% passing ¾" square sieve	28 - 70%
% passing #4 square sieve.....	10 - 35%
% passing U.S. #200 sieve.....	0 - 10%

All percentages are by weight.
The portion of ballast retained on ¼ inch sieve shall not contain more than 0.1 percent vegetative debris or trash.

7.2.1.1-7B

8 INCH PLUS ROCK

% equal to, or larger in one dimension than the specified size	100%
% passing U.S. #40 sieve	16% Max
% passing U.S. #200 sieve	5% Max

All percentages are by weight.
The portion of ballast retained on 1/4 inch sieve shall not contain more than 0.1 percent vegetative debris or trash.

7.2.1.1-9

Landing rock shall be no coarser than 6 INCH MINUS.

7.2.2-1

Rock crushing operations shall conform to the following specifications:

- a. The Purchaser shall provide a weatherproof field laboratory equipped with gradation testing equipment. This laboratory shall be available for use by the Contract Administrator during the entire crushing operation.
- b. The crushing operation shall be concluded within 12 working days from the time it begins.
- c. If a smooth roll crusher is used, the maximum size of material fed into it shall be equal to the largest size of the material coming out of it plus 8.5 percent of the roll radius.

7.2.3-1

Measurement of the rock shall be on a cubic yard truck measure basis. Each truck box shall be measured by the Contract Administrator prior to rock hauling. The Contract Administrator shall periodically require that a load be flattened off and its volume calculated. An average of such volumes for each truck shall be used to tally the volume to be hauled. The Purchaser shall provide and maintain load tally sheets for each truck and shall give them to the Contract Administrator upon request.

7.4.2-1

Apply at least the minimum rock quantity as shown on ROCK LIST. Rock shall meet the specifications on the ROCK LIST.

7.4.2-7

Turnarounds, turnouts, and curve widening shall have rock applied to the same depth and specifications as the traveled way.

7.4.2-8

Each lift of rock shall be crowned as shown on TYPICAL SECTION SHEET, and shall be uniform, firm, rut-free, and shaped to ensure surface runoff in an even, unconcentrated manner.

7.4.3-1

Rock shall be mixed, compacted, and graded in sections not to exceed 1/2 mile in length. Water shall be added in quantities to facilitate compaction. If directed by the Contract Administrator, a minimum of 6 gallons of water per cubic yard of rock shall be applied.

7.4.3-2

Rock shall be spread and compacted full width in lifts each not to exceed 12 inches uncompacted depth. Compaction shall be by smooth drum vibratory roller weighing at least 14,000 pounds. Four complete passes at a maximum speed of 3 mph shall be made on each lift.

7.4.4-1

Riprap shall consist of angular stone placed as indicated in this plan, or as directed by the Contract Administrator.

Loose Riprap - The stone for loose riprap shall be hard, sound and durable. It shall be free from segregation, seams, cracks, and other defects tending to destroy its resistance to weather. Loose riprap shall be free of rock fines, soil, or other extraneous material.

Light Loose Riprap - Shall meet the following requirements for grading:

<u>At Least/Not More Than</u>	<u>Size Range</u>	<u>Maximum Size</u>
20% / 90%	300 lbs. to 1 ton	--
80% / --	50 lbs. to 1 ton	--
10% / 20%	--	50 lbs.

7.4.4-2

Riprap shall be set in place in conjunction with construction of the embankment. Placement shall be by zero drop height methods only.

SECTION 9 - ROAD AND LANDING DEACTIVATION

9.2-1

Purchaser shall reduce or relocate landing debris, in a manner approved, in writing, by the Contract Administrator, to avoid landing failures and potential debris slides.

9.2-2

Purchaser shall provide for drainage of the landing surface as approved, in writing, by the Contract Administrator.

9.2-3

Landing embankments shall be sloped to original construction specifications.

The diagram illustrates the geometry of a turnout on a road. The main cross-section shows a road with a central turnout. Key dimensions include:

- $C1$: Clear width on the left side of the turnout.
- $G1$: Guard rail offset on the left side.
- D : Depth of the ditch on the left side.
- W : Width of the turnout at the base.
- $K1$: Slope ratio of the left side of the turnout.
- $K2$: Slope ratio of the right side of the turnout.
- R : Radius of the turnout curve.
- S : Length of the turnout from the centerline to the end of the curve.
- ℓ : Centerline offset.
- L : Length of the turnout from the centerline to the end of the curve.
- T : Thickness of the turnout.
- H : Height of the turnout.
- $C2$: Clear width on the right side of the turnout.
- $G2$: Guard rail offset on the right side.

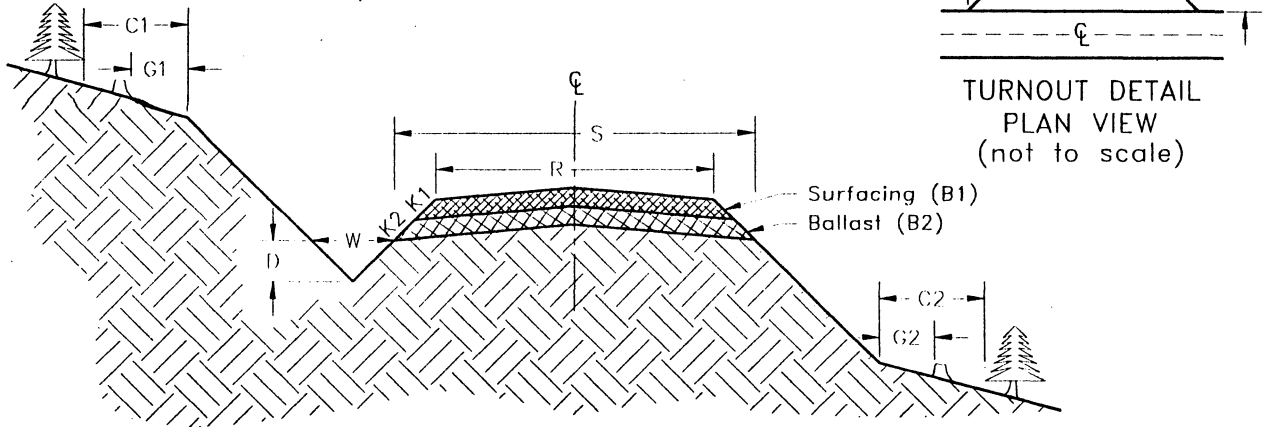
 The turnout is shown with two layers: Surfacing (B1) and Ballast (B2). The turnout detail plan view shows the turnout as a trapezoid with dimensions T , L , H , and ℓ .

***Refer to CULVERT INSTALLATION DETAIL**

ROCK LIST

BALLAST

ROAD CROSS-SECTION
(not to scale)



Road Number	From Station	To Station	Rock Slope	Compacted Rock Depth	C.Y./ Station	# of Stations	C.Y. Subtotal	Rock Source	Turnout		
									Length	Width	Taper
			K2	B2					L	H	T
					3 INCH MINUS CRUSHED			Buck Ridge, Five Forks, or Upper Lytle Quarry			
B-Line	MP 4.10		1 ½:1	12"	112	1.00	112				
	Culvert bedding & backfill				-	-	599				
B-3000	0+00	47+27	1 ½:1	16"	87	47.27	4,112				
	Turnouts (4)		1 ½:1	16"	87	4.00	348		50'	10'	50'
	Landing (1)		1 ½:1	-	-	-	40				
	Culvert backfill		-	-	-	-	210				
Spur 2	0+00	8+60	1 ½:1	16"	87	8.60	748				
	Culvert backfill		-	-	-	-	35				
Spur 3	0+00	2+25	1 ½:1	16"	87	2.25	196				
	Culvert backfill		-	-	-	-	30				
					8 INCH PLUS						
B-3000	Culvert headwalls & outlets			-	-	-	14				
Spur 2	Culvert headwalls & outlets			-	-	-	2				
Spur 3	Culvert headwall & outlet			-	-	-	1				
					LIGHT LOOSE RIPRAP						
B-Line	Fill slope armoring		-	-	-	-	130				
					1 ½ FOOT MINUS			Waddell Basalt Quarry Stockpile			
B-Line	Culvert fill material		-	-	-	-	170				

3 INCH MINUS CRUSHED TOTAL 6,430 Cubic Yards
8 INCH PLUS TOTAL 17 Cubic Yards
LIGHT LOOSE RIPRAP TOTAL 130 Cubic Yards
1 ½ FOOT MINUS TOTAL 170 Cubic Yards

SURFACE

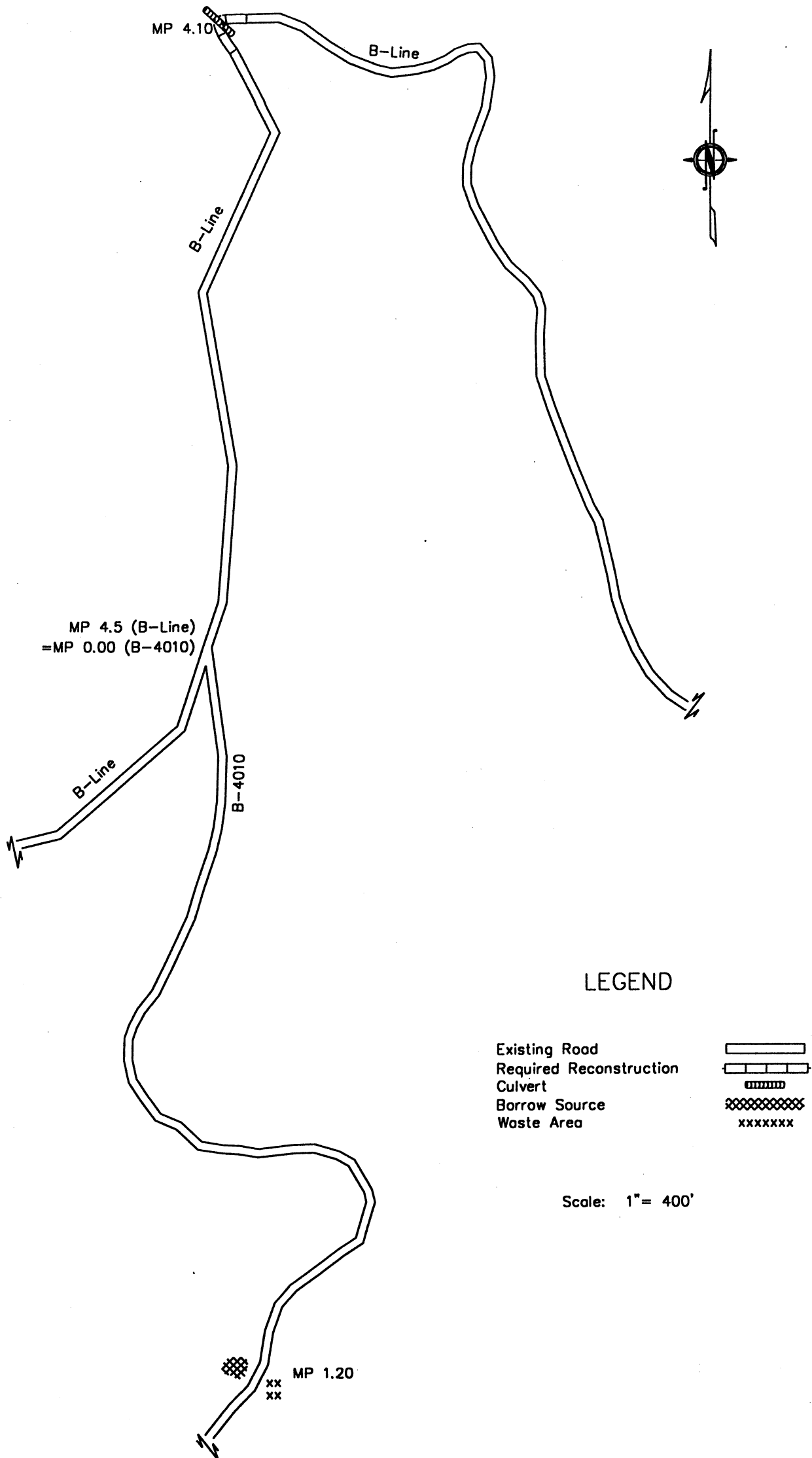
Road Number	From Station	To Station	Rock Slope	Compacted Rock Depth	C.Y./ Station	# of Stations	C.Y. Total	Rock Source
			K1	B1				
B-Line	MP 4.10		1 ½:1	6"	1 ½ INCH MINUS CRUSHED 53 1.00 53			Buck Ridge, Five Forks, or Upper Lytle Quarry

1 1/2 INCH MINUS CRUSHED TOTAL 53 Cubic Yards

AMBER

ROAD PLAN MAP

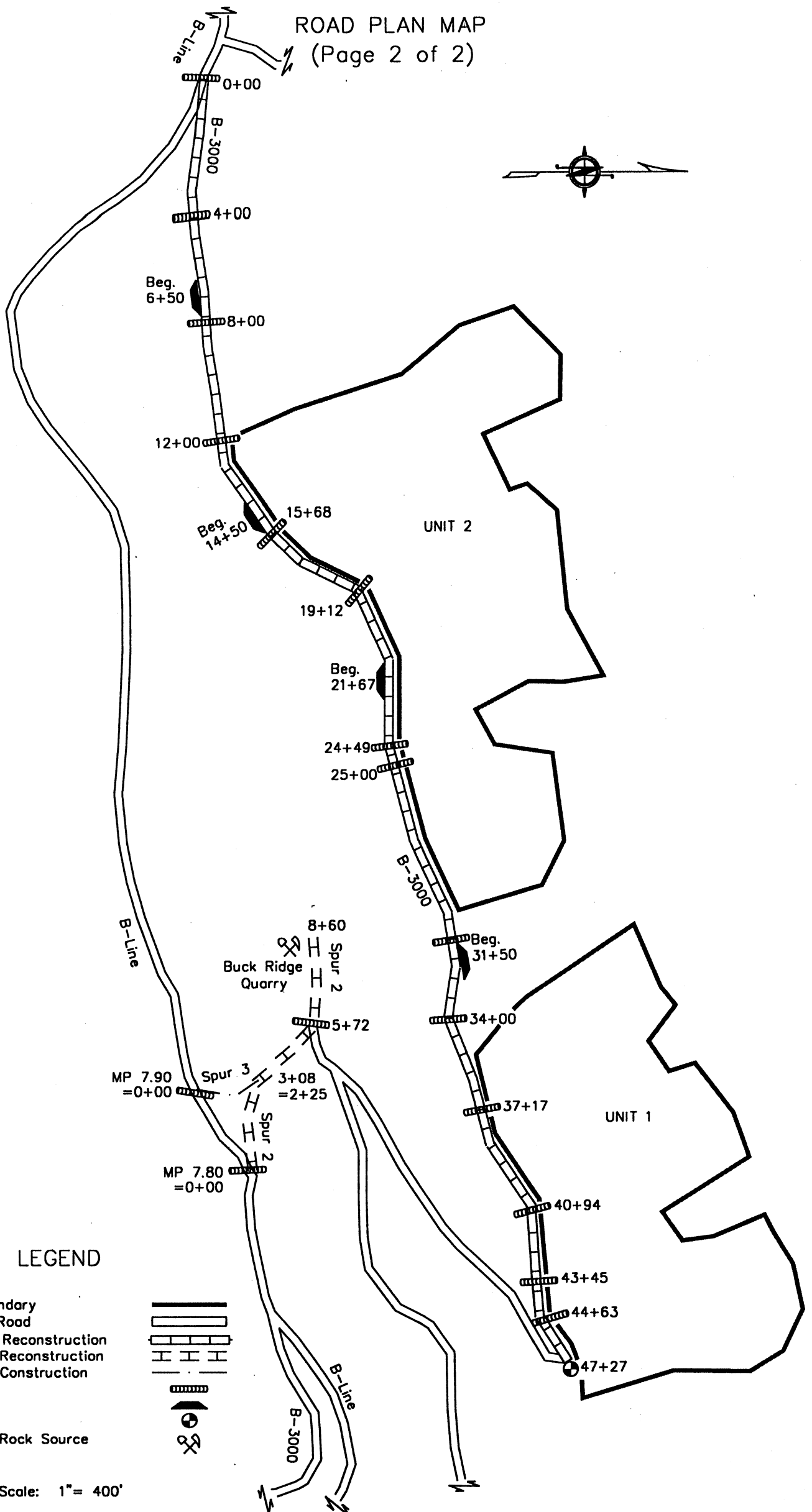
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AMBER

ROAD PLAN MAP

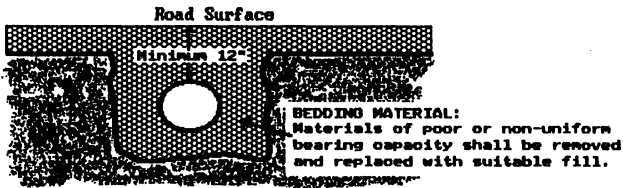
(Page 2 of 2)



CULVERT LIST

Road Number	Location	Culvert		Length (ft)			Riprap (C.Y.)			Backfill	Quantity	Const.	Remarks
		Dia.	Gauge	Culvert	Downspt	Flume	Inlet	Outlet	Type	Material	c.y.	Staked	
			If Steel										
B-Line B-3000	MP 4.10	120"	12	55	-	-	30	40	LL	3"	599	-	Aluminized steel
	0+00	18"	-	34	-	-	0.5	0.5	8"	3"	15	-	CPP
	4+00	18"	-	32	-	-	0.5	0.5	8"	3"	15	-	CPP
	8+00	18"	-	32	-	-	0.5	0.5	8"	3"	15	-	CPP
	12+00	18"	-	32	-	-	0.5	0.5	8"	3"	15	-	CPP
	15+68	18"	-	32	-	-	0.5	0.5	8"	3"	15	-	CPP
	19+12	18"	-	32	-	-	0.5	0.5	8"	3"	15	-	CPP
	24+49	18"	-	32	-	-	0.5	0.5	8"	3"	15	-	CPP
	25+00	18"	-	32	-	-	0.5	0.5	8"	3"	15	-	CPP
	31+50	18"	-	32	-	-	0.5	0.5	8"	3"	15	-	CPP
	34+00	18"	-	34	-	-	0.5	0.5	8"	3"	15	-	CPP
	37+17	18"	-	32	-	-	0.5	0.5	8"	3"	15	-	CPP
	40+94	18"	-	34	-	-	0.5	0.5	8"	3"	15	-	CPP
	43+45	18"	-	34	-	-	0.5	0.5	8"	3"	15	-	CPP
	44+63	18"	-	34	-	-	0.5	0.5	8"	3"	15	-	CPP
	Spur 2 0+00	18"	-	34	-	-	0.5	0.5	8"	3"	15	-	CPP
	5+72	18"	-	40	-	-	0.5	0.5	8"	3"	20	-	CPP
Spur 3	0+00	18"	-	50	-	-	0.5	0.5	8"	3"	30	-	CPP

CULVERT BACKFILL AND BASE PREPARATION
(For culverts less than 36")

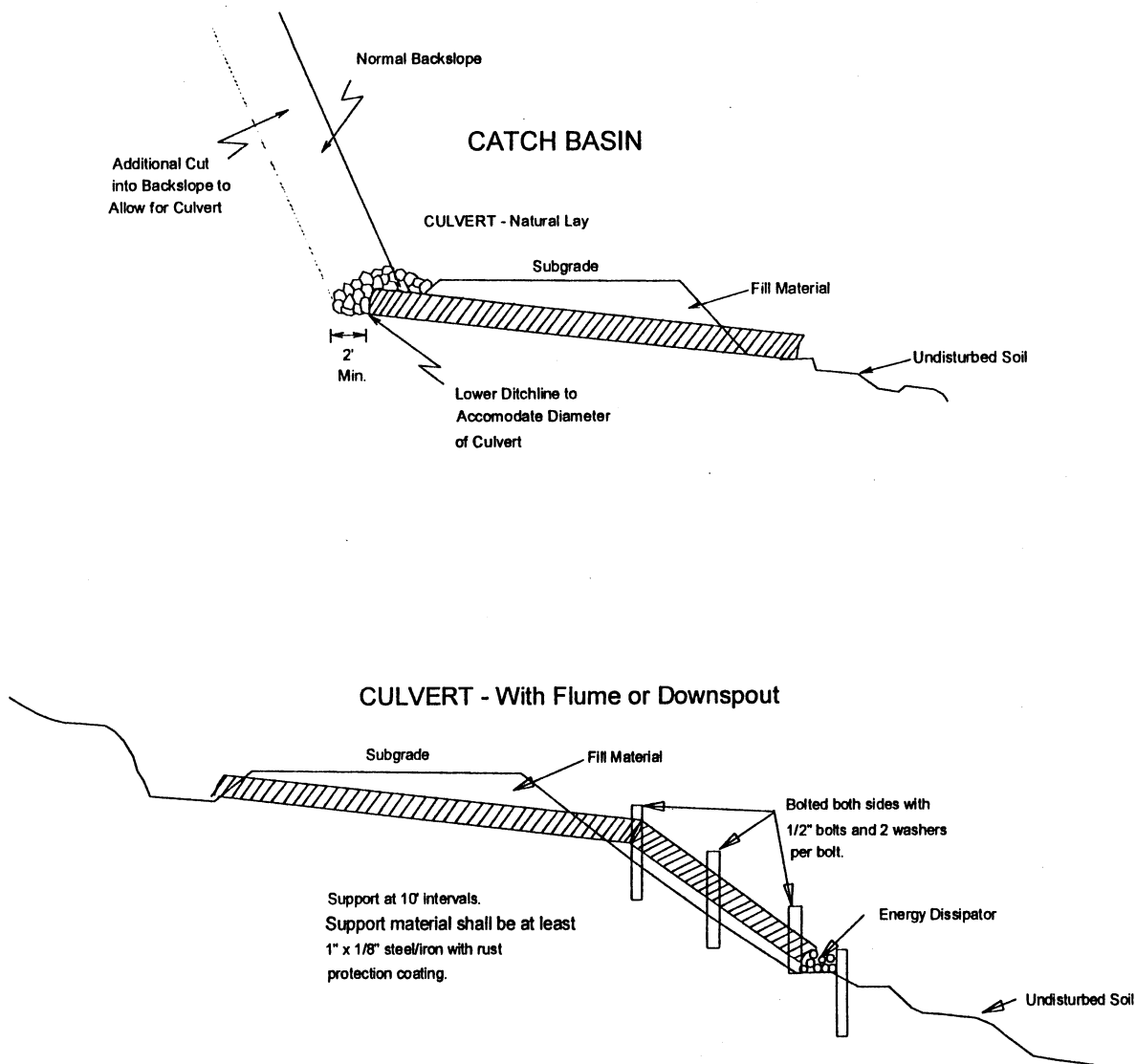


Key:

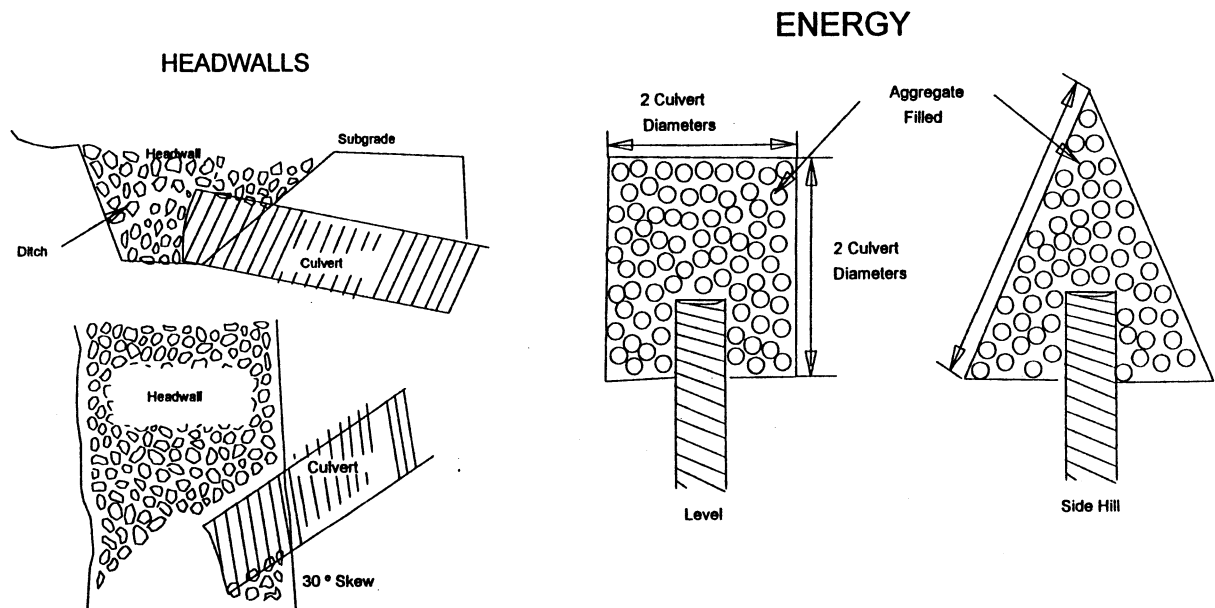
- 3" - 3 Inch Minus Crushed Rock
- NT - Native (bank run)
- SL - Select Fill
- HL - Heavy Loose Riprap
- LL - Light Loose Riprap
- Flume - Half round pipe
- Downspout - Full round pipe
- CPP - Corrugated Polyethylene Pipe

CULVERT AND DRAINAGE SPECIFICATION DETAIL

(Page 1 of 2)



Proper preparation of foundation and placement of bedding material shall precede the installation of all culvert pipe. This includes necessary leveling of the native trench bottom and compaction of required bedding material to form a uniform dense unyielding base. The backfill material shall be placed so that the pipe is uniformly supported along the barrel.



Headwalls to be constructed of material that will resist erosion.

Dissipator Specifications:
Depth: 1 culvert diameter
Aggregate: as specified in the CULVERT LIST.

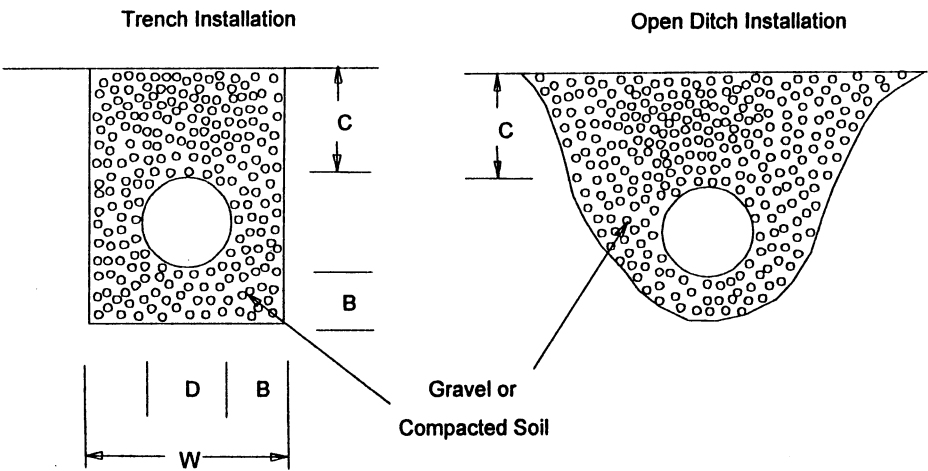
CULVERT AND DRAINAGE SPECIFICATION DETAIL

(Page 2 of 2)

POLYETHYLENE PIPE INSTALLATION

INSTALLATION REQUIREMENTS:

- 1. Crushed stone, gravel, or compacted soil backfill material shall be used as the bedding and envelope material around the culvert. The aggregate size shall not exceed 1/6 pipe diameter or 4" diameter, whichever is smaller.
- 2. The corrugated pipe shall be laid on grade, on a layer of bedding material as shown for the two types of installations. If native soil is used as the bedding and backfill material, it shall be well compacted in six inch layers under the haunches, around the sides and above the pipe to the recommended minimum height of cover.
- 3. Either crushed aggregate or flexible (asphalt) pavement may be laid as part of the minimum cover requirements.
- 4. Site conditions and availability of bedding materials often dictate the type of installation method used.
- 5. The load bearing capability of flexible conduits is dependent on the type of backfill material used and the degree of compaction achieved. Crushed stone and gravel backfill materials typically reach a compaction level of 90-95% AASHTO standard density without compaction. When native soils are used as backfill material, a compaction level of 85% is required. This minimum compaction can be achieved by either hand or mechanical tamping.



MINIMUM DIMENSIONS
Trench or Open Ditch Installation

Nominal Diameter	Minimum Thickness	Minimum Cover	Min. Trench Width
D	B	C	W
18"	6"	12"	36"
24"	6"	12"	42"
30"	6"	12"	48"
36"	6"	12"	54"

STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES

FOREST ACCESS ROAD
MAINTENANCE SPECIFICATIONS

1. CONSTRUCTION AND RECONSTRUCTION (Prior to acceptance to the contract or acceptance on a timber sale).

A. Cuts and Fills

1. Maintain slope lines as constructed. Remove slides from the ditches and roadway. Replace fills to 1½:1 slopes with selected material or as directed. Remove overhanging material from the cut slopes.
2. Material from slides or other sources requiring removal shall not be deposited in streams or at locations where it will erode into streams or water courses.
3. Undesirable slide materials and debris shall not be mixed into the surface material.

B. Surface

1. Grade and shape the road surface, turnouts, and shoulders to the original crown, inslope or outslope as directed to provide suitable traveled surface and surface water runoff in an even, unconcentrated manner.
2. Blading must not undercut the backslope at the bottom of the ditchline or cut geotextile at centerline.
3. Watering may be required to control dust and to retain fine surface rock.
4. Desirable surface material shall not be bladed off the roadway.
5. Replace surface material lost or worn away.
6. Remove berms except as directed by the State.
7. Barrel spread soft spots to prevent degradation of geotextile.

C. Drainage

1. Keep ditches and drainage channels at outlets and inlets of culverts clear of obstructions and functioning as intended.
2. Inspect and clean culverts at least monthly, with additional inspections during storms and periods of high runoff. This must be done even during periods of inactivity.
3. Add stable material at the outlet end of the culvert as needed to stabilize the stream bed.
4. Headwalls: maintain to the road shoulder level with material that will resist erosion.
5. Keep silt bearing surface runoff from getting into live streams.

D. Structures

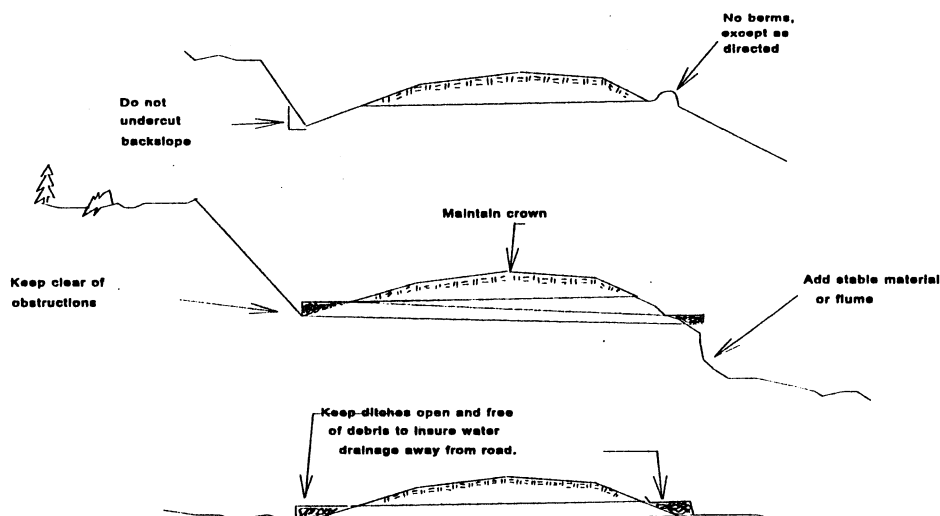
Repair bridges, culverts, cattleguards, fences, and other road structures to the condition required by the construction specifications.

E. Termination of Use or End of Season

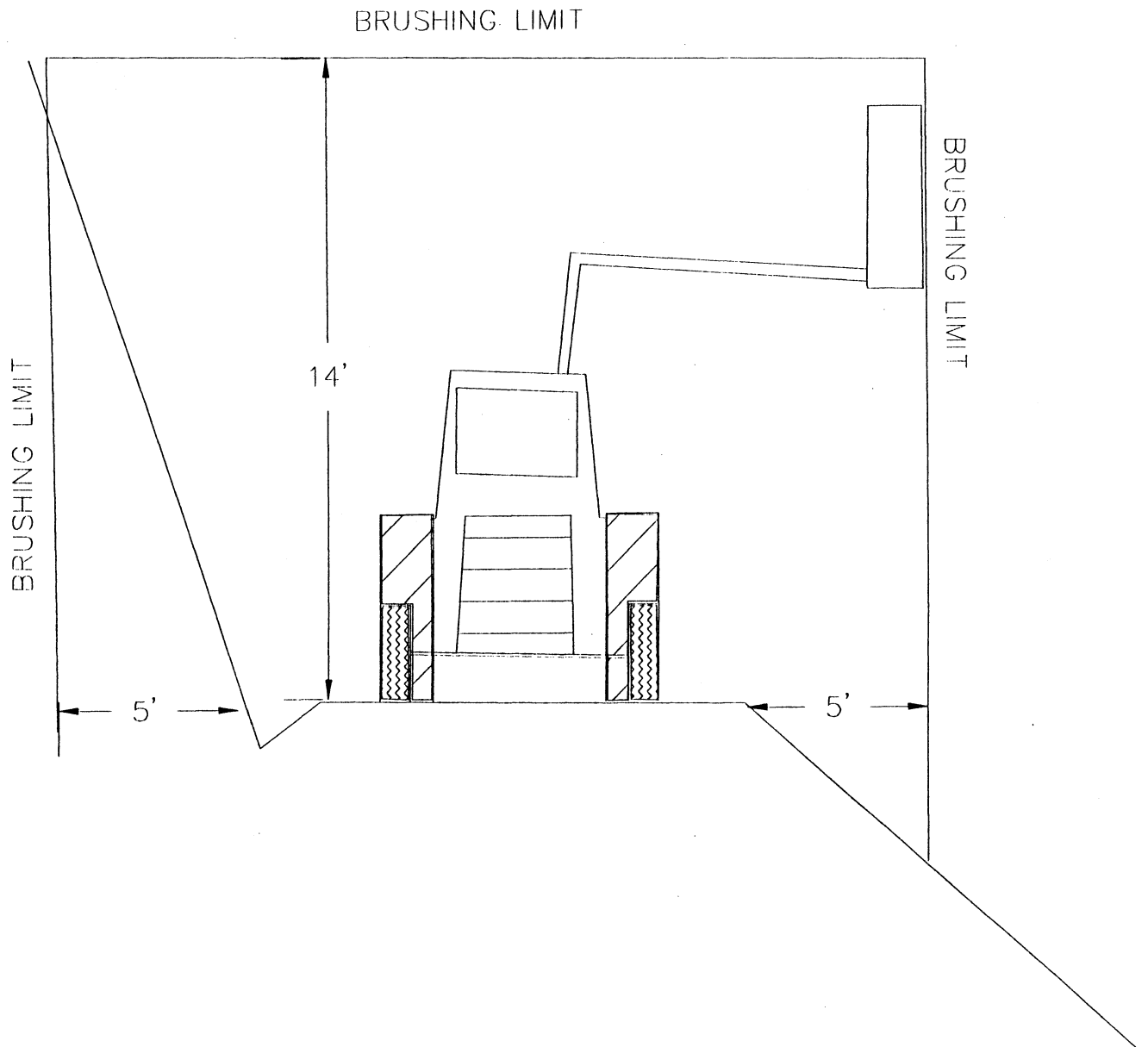
Do maintenance work to minimize damage from the elements such as blading to insure correct runoff, ditch, and culvert cleaning and water bars.

F. Debris

Remove fallen timber, limbs, and stumps from the slopes or roadway.

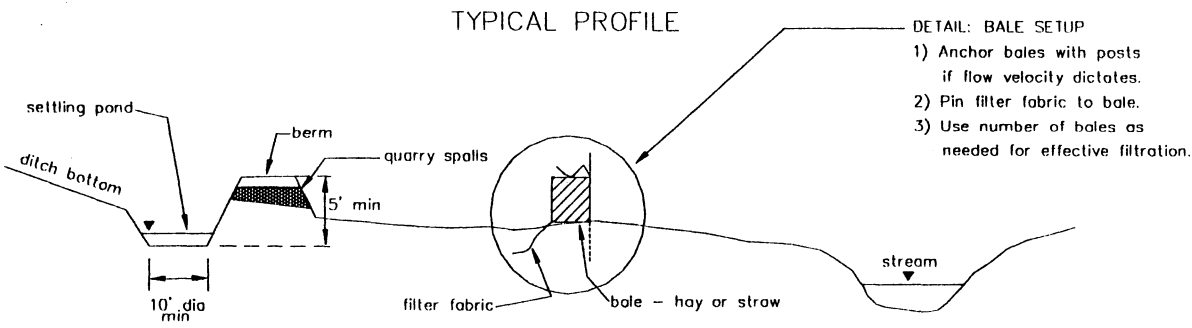
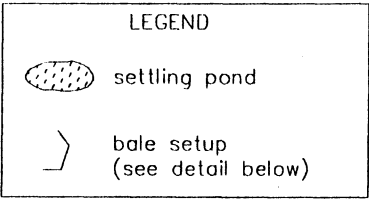
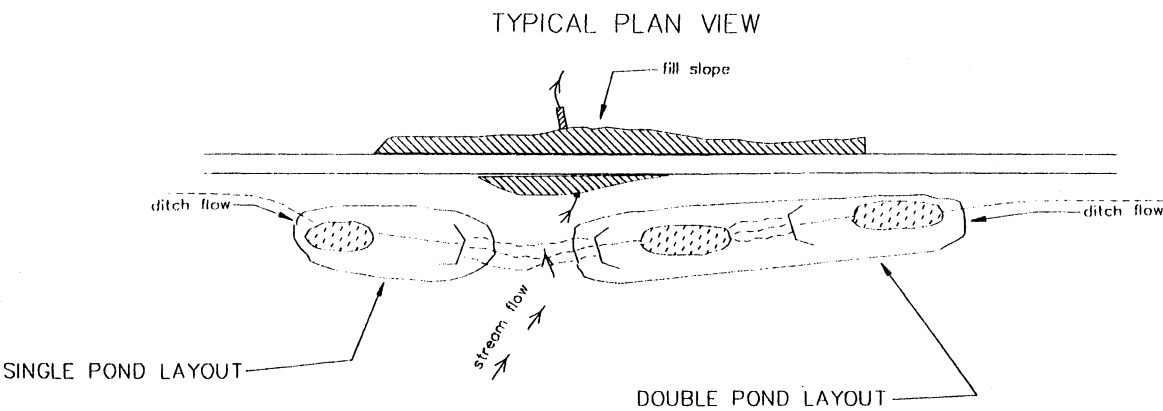


BRUSHING SECTION DETAIL

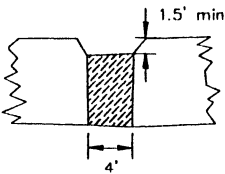


SETTLING POND DETAIL

NO SCALE



TYPICAL END VIEW OF OUTLET

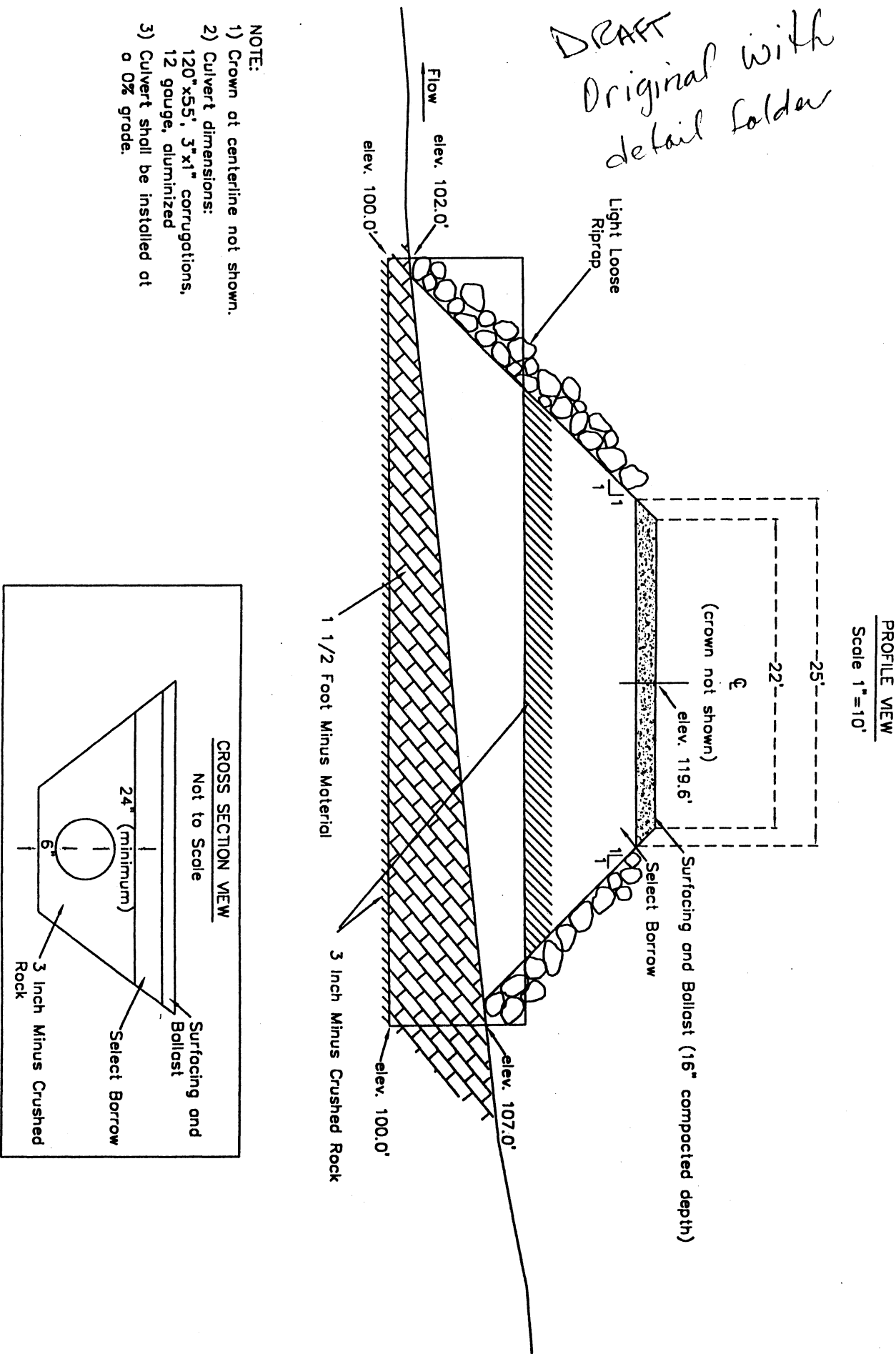


CULVERT INSTALLATION DETAIL

B-Line @ MP 4.1

(Page 1 of 2)

- NOTE:
- 1) Crown at centerline not shown.
 - 2) Culvert dimensions:
120"x55", 3"x1" corrugations,
12 gauge, aluminized
 - 3) Culvert shall be installed at
0 0% grade.



Washington State Department of Natural Resources – Central Region				Date: October 17, 2001	
Peer Review Initials/date:				Designed by: Terry Orton	
PE Signature/Seal				f: \engineer\sales\amber\cinsmp41.dwg	
Initials	Date	Initials	Date	Drafted by: Alicia Compton	

CULVERT INSTALLATION DETAIL

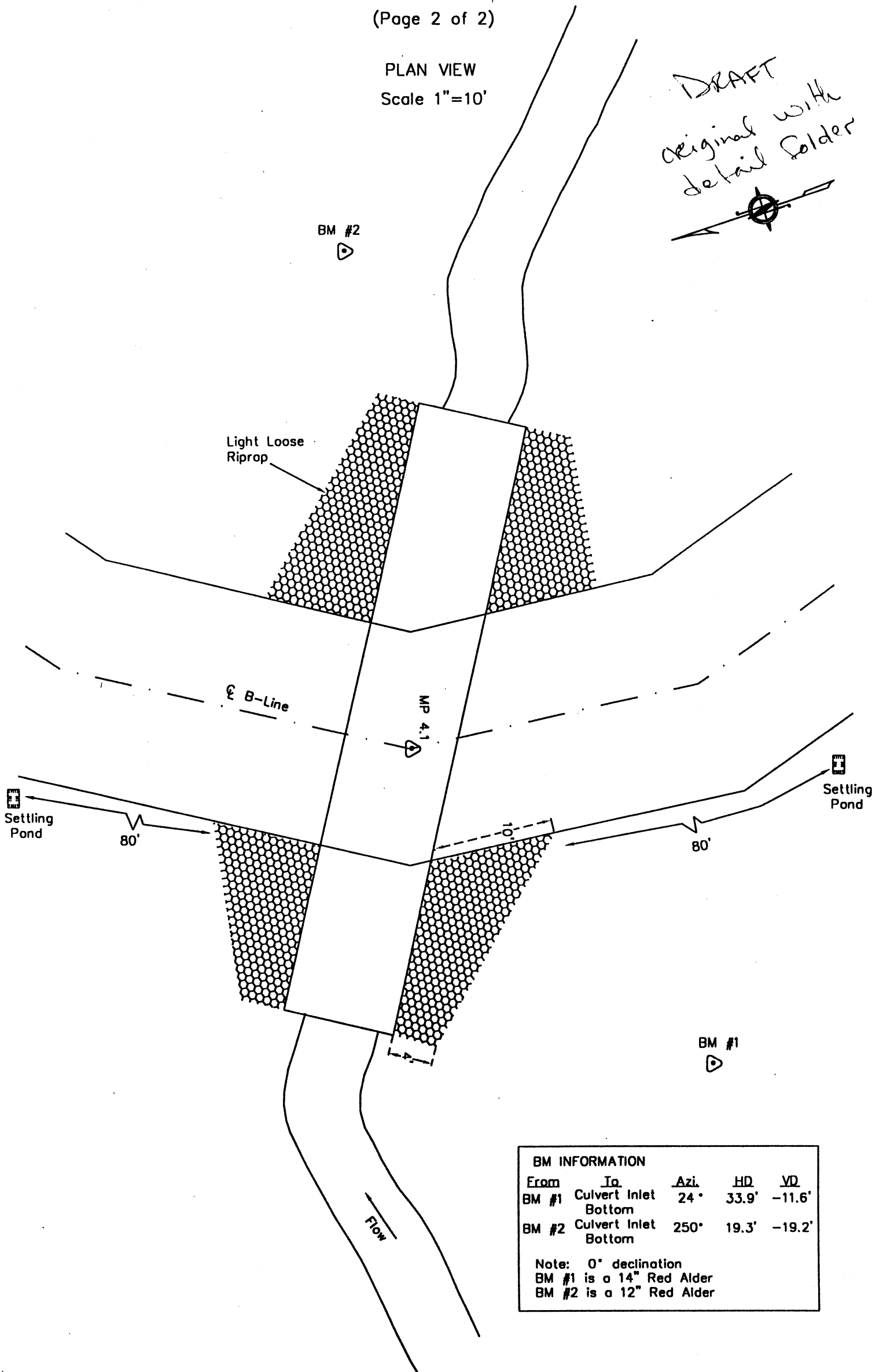
B-Line @ MP 4.1

(Page 2 of 2)

PLAN VIEW

Scale 1"=10'

DRAFT
original with
detail Solder



BM INFORMATION				
From	To	Azi.	HD	VD
BM #1	Culvert Inlet Bottom	24°	33.9'	-11.6'
BM #2	Culvert Inlet Bottom	250°	19.3'	-19.2'

Note: 0° declination
 BM #1 is a 14" Red Alder
 BM #2 is a 12" Red Alder

LIVE STREAM CULVERT REMOVAL PROCEDURE

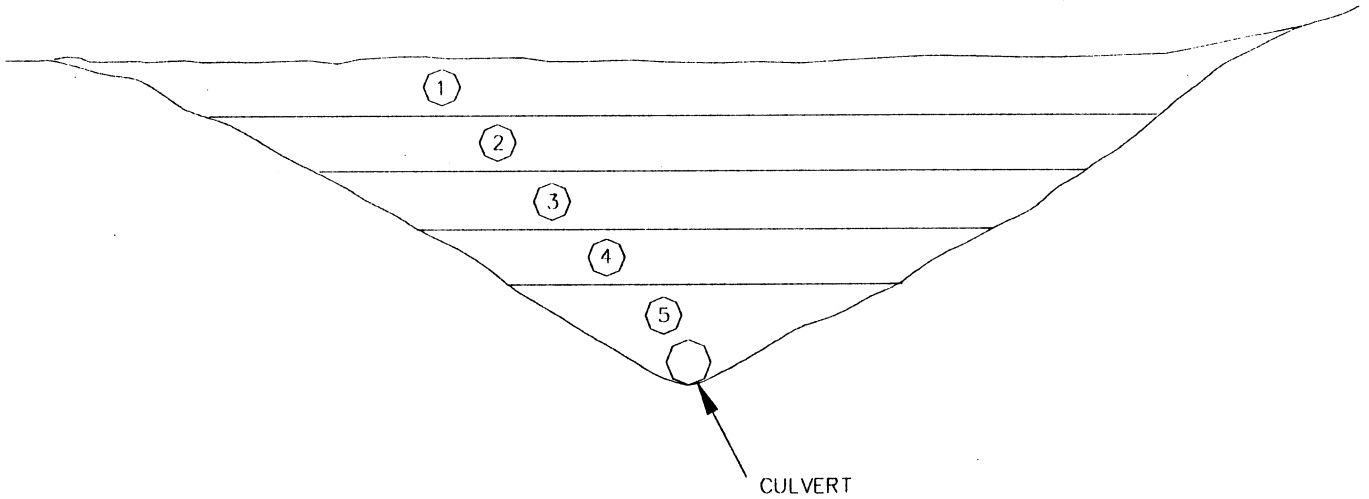
Order of work is as follows, deviations shall be approved, in writing, by the Contract Administrator.

- 1) Purchaser shall notify the State of intent to start project, and a pre-work conference shall be held before move in of equipment. State will designate a representative that will remain on site at all times when work is being performed in creek channel.
- 2) Assemble the items on the "Materials List" onsite before proceeding.
- 3) Remove 95% of fill (see FILL REMOVAL DETAIL) and set aside to use as fill or end haul to milepost 1.2 on the B-4010 road as directed by the Contract Administrator.
- 4) Set up pumps (3 required, with one as backup).
- 5) Dam up stream with sandbags and line floor of dam with plastic (to prevent sub-surface water flow), place clean rock on plastic to hold in place, and key leading edge of plastic into channel bottom - see SETTLING POND AND PUMP DETAIL. Build a settling pond at culvert outlet. Fill may need to be removed before the settling pond installation due to space limitations. Pump clean water at catch basin around work site and back into stream. Dirty water shall be pumped away from site and onto forest floor a minimum of 200 feet from live streams. Silt fence shall be erected at base of fill slope as directed by the Contract Administrator and bottom edge of fence shall be keyed into slope and held in place with rocks to prevent water from flowing under the silt fence.
- 6) Remove remainder of fill and culvert.
- 7) Backfill settling pond.
- 8) Cover exposed soils within 100 feet of all live streams with straw (minimum depth of 8 inches) and grass seed.

Materials List:

- 3 pumps, (one as a backup) The clean water pump (dam at culvert catch basin) shall have a minimum capacity of 1200 gallons per minute. The dirty water pump (settling pond) and the backup pump shall each have a minimum capacity of 600 gpm. Culvert removal should not start during rain or threat of rain;
- 1,000 square feet plastic sheet;
- 200 feet of silt fence and stakes;
- 20 bales of straw.

FILL REMOVAL DETAIL



- Remove fill in layers not to exceed 3 feet.
- Channel slopes shall be according to Section 6 – DRAINAGE and the Live Stream Culvert Removal Procedure

FPA #2509101

Received: 01/31/2002

Decision Date: 03/02/2002

Expiration Date: 03/02/2004

State of Washington
Dept of Natural Resources
DECISION ACTIVITY PACKET

Classified: CLASS III-30

Amber

EARR Tax Credit - ELIGIBLE

Quals: 4 1

Risk Assessment Issue: Habitat Conservation Plan or other formal agreemt
Risk Assessment Issue: Road const with water intake w/in .5 mi downstream
Risk Assessment Issue: Road const on highly erodible soils
Risk Assessment Issue: Timber harv w/in or across type 1-3 stream or RMZ
Risk Assessment Issue: Timber harv within 25 feet of type 4-5 water

Legal: SESW, SESE of Section 32; T18R04W W.M.

Legal: SWSE of Section 32; T18R04W W.M.

Legal: NWNE, NENE of Section 5; T17R04W W.M.

Legal: NENW of Section 5; T17R04W W.M.

Legal: SW of Section 23; T18R04W W.M.

County: GRAYS HARBOR

County: THURSTON

Region: CENTRAL

Assigned to: KRISTIAN KNUTZEN

Operator:
DEPT OF NATURAL RESOURCES
P.O. Box S-3

Phone: (360) 748-2383

CENTRAL REGION

Municipal subdivision

Landowner:
DEPT OF NATURAL RESOURCES
P.O. Box S-3

Phone: (360) 748-2383

CENTRAL REGION

Municipal subdivision

Timber Owner:
DEPT OF NATURAL RESOURCES
P.O. Box S-3

Phone: (360) 748-2383

CENTRAL REGION

Municipal subdivisionTax#: 800888888

This application is | APPROVED | subject to the following:

Activity under this application must follow Washington State
Forest Practice Laws and Rules in addition to any conditions
on the application.

Compliance with this application does not ensure compliance with the
Endangered Species Act or other Federal, State or Local laws.

Packet Created: 03/01/2002

FPAN-2509101 Conditions

THE FOLLOWING IS PROVIDED FOR YOUR INFORMATION:

RCW 76.09.220 (8) provides any aggrieved person the right to appeal the approval or disapproval of a forest practices application.

RCW 43.21C.075 provides any aggrieved person the right to appeal issues arising under the State Environmental Policy Act. Appeals must be filed within 30 days of the approval or disapproval of the forest practices application. Appeals must be filed with the FOREST PRACTICES APPEALS BOARD, PO BOX 40903, 4224 6TH AVE SE BLDG #2, LACEY WA 98504-0903. Appeals must be filed in writing on the form required in Title 223-08. Concurrently with filing of the Forest Practices Appeals Board, copies of the appeals must also be filed with the OFFICE OF THE SUPERVISOR, DEPT OF NATURAL RESOURCES, 1111 WASHINGTON ST SE, 4TH FLOOR NATURAL RESOURCES BLDG., PO BOX 47001, OLYMPIA, WA 98504-7001, and with the ATTORNEY GENERAL, PO BOX 40100, OLYMPIA, WA 98504-0100.

No TRAXS Flags

Within city limits?	NO
Harvest within 500 ft of park?	NO
Harvest within park?	NO
Land platted after 1/1/60?	NO
Intends to convert w/in 3 years?	NO
Has Conversion Option Harvest Plan?	NO

WATER AND WETLAND INFORMATION SECTION

Works in Waters	Water Type					Wetlands Type		
	1	2	3	4	5	Forested	A	B
Road Construction	3	4	5	.	.	.
Water Crossing	3	.	5	.	.	.
Falling / Bucking	5	.	.	.
Cable Yarding	5	.	.	.
Suspend Cables	3	4	5	.	.	.
Ground Skidding
Operate Equipment
Apply Chemicals
Other Activity
Operating w/in 200 ft of type 1-3 water?						YES	Distance:	0
Operating w/in 25 ft of type 4-5 water?						YES		

- 3 -

Aware of any water intakes w/in 1/2 mile downstream?	NO
Trees to be removed from max. width RMZ?	NO
Is this project in or near a wetland?	NO
Will this project fill / drain a wetland?	NO

ROAD CONSTRUCTION SECTION			
Type of construction	Length (ft)	Endhaul (ft)	Steepest Slope
New permanent road construction	225	0	10%
Reconstruction of existing road	5,687	100	60%

TIMBER HARVEST SECTION							
Unit No.	Type of Harvest	Post-Harvest Trees/Acre	Method of Harvest	Tot harv App	Acres GIS	Volume Percent	Volume (MBF)
1	EVEN AGE	10	HIGH LEAD CABLE	49.0	45.9	93	2,197

Green Recruitment Trees will be:	CLUMPED
Green Recruitment Trees will be:	EVEN
Wildlife Reserve Trees will be:	CLUMPED
Wildlife Reserve Trees will be:	EVEN

Double-wide RMZ for green-up?	NO	
Unit to be reforested?	YES	BY PLANTING DOUGLAS FIR

UMA Acres:	NONE
Length of RMZ:	3,778 ft
Length of WMZ:	0 ft

AERIAL CHEMICAL APPLICATION SECTION

Type of Chemical Application:	NONE
-------------------------------	------

Dept of Agriculture Experimental Use Permit?	NO
--	----

APPLICANT PROVIDED DETAILS

THIS SALE IS WHOLLY COMPLIANT WITH THE DEPARTMENT'S HABITAT CONSERVATION PLAN. SALE BOUNDARY IS MARKED WITH SALE BOUNDARY TAGS AND FLOURESCENT FLASHERS. NEW

FPA #2509101

State of Washington

Received: 01/31/2002

Dept of Natural Resources

Classified: CLASS III-30

Decision Date: 03/02/2002

DECISION ACTIVITY PACKET

Expiration Date: 03/02/2004

- 4 -

ROADS ARE MARKED WITH THREE FOOT LATH AND ORANGE RIBBON. RESERVE TREE CLUMPS ARE BOUNDARIED BY LEAVE TREE AREA TAGS AND FLOURESCENT FLASHERS. SCATTERED RESERVE TREES ARE MARKED WITH BLUE PAINT. CULVERT WILL BE REPAIRED TO PROVIDE FOR FISH PASSAGE. AMBER #73108.

DNR STAFF COMMENTS

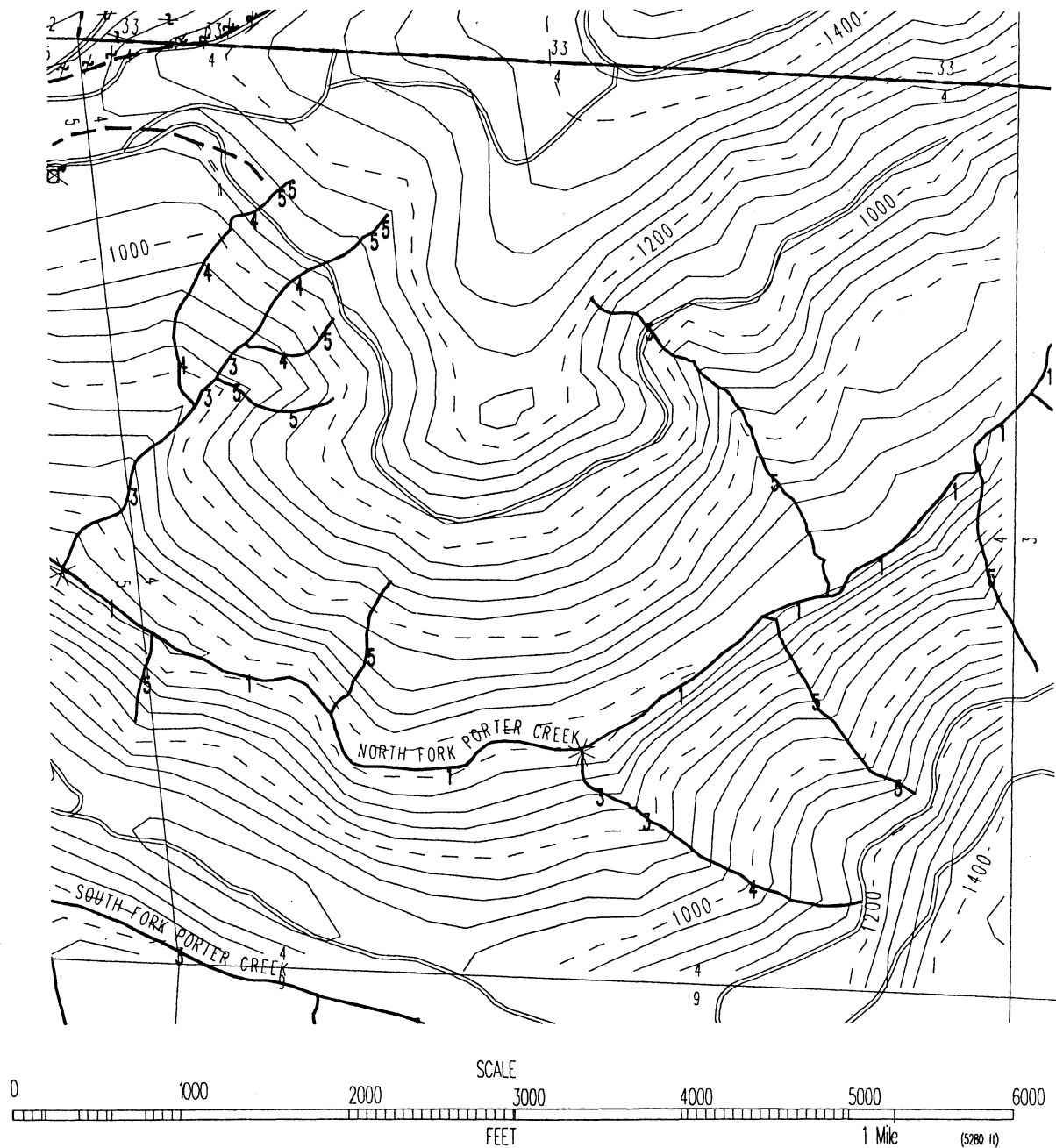
SHUTDOWN ZONE 651N PER MM ADDENDUM, LO HAS HCP. PER WATER TYPE ADDENDUMS, SWAN CREEK DOES MEET T3 CRITERIA, REST DO NOT.
ADDITIONAL RISK ASSESSMENT #61

END OF REPORT - FPA #2509101

Packet Created: 03/01/2002

FOREST PRACTICE ACTIVITY MAP

TOWNSHIP 17 NORTH, RANGE 04 WEST (W.M.), SECTION 4
APPLICATION # 2509101



MAP DATE: February 01, 2002

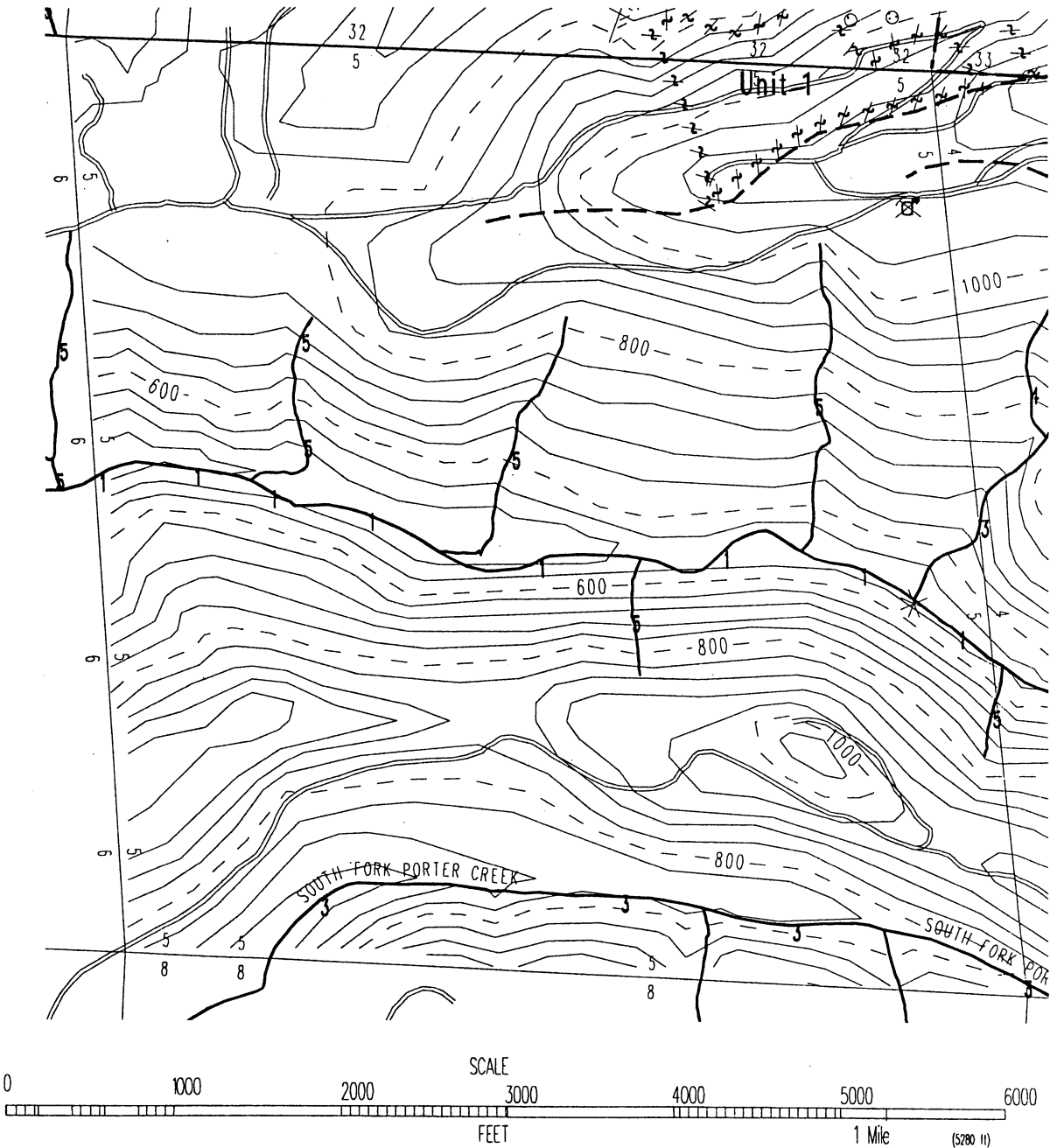
CONTOUR INTERVAL 40 Feet
NAD 27

LEGEND: See Instructions
DISCLAIMER: See Legend

MAP 1 of 5

FOREST PRACTICE ACTIVITY MAP

TOWNSHIP 17 NORTH, RANGE 04 WEST (W.M.), SECTION 5
APPLICATION # 2509101



MAP DATE: February 01, 2002

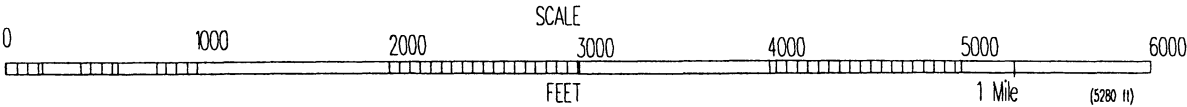
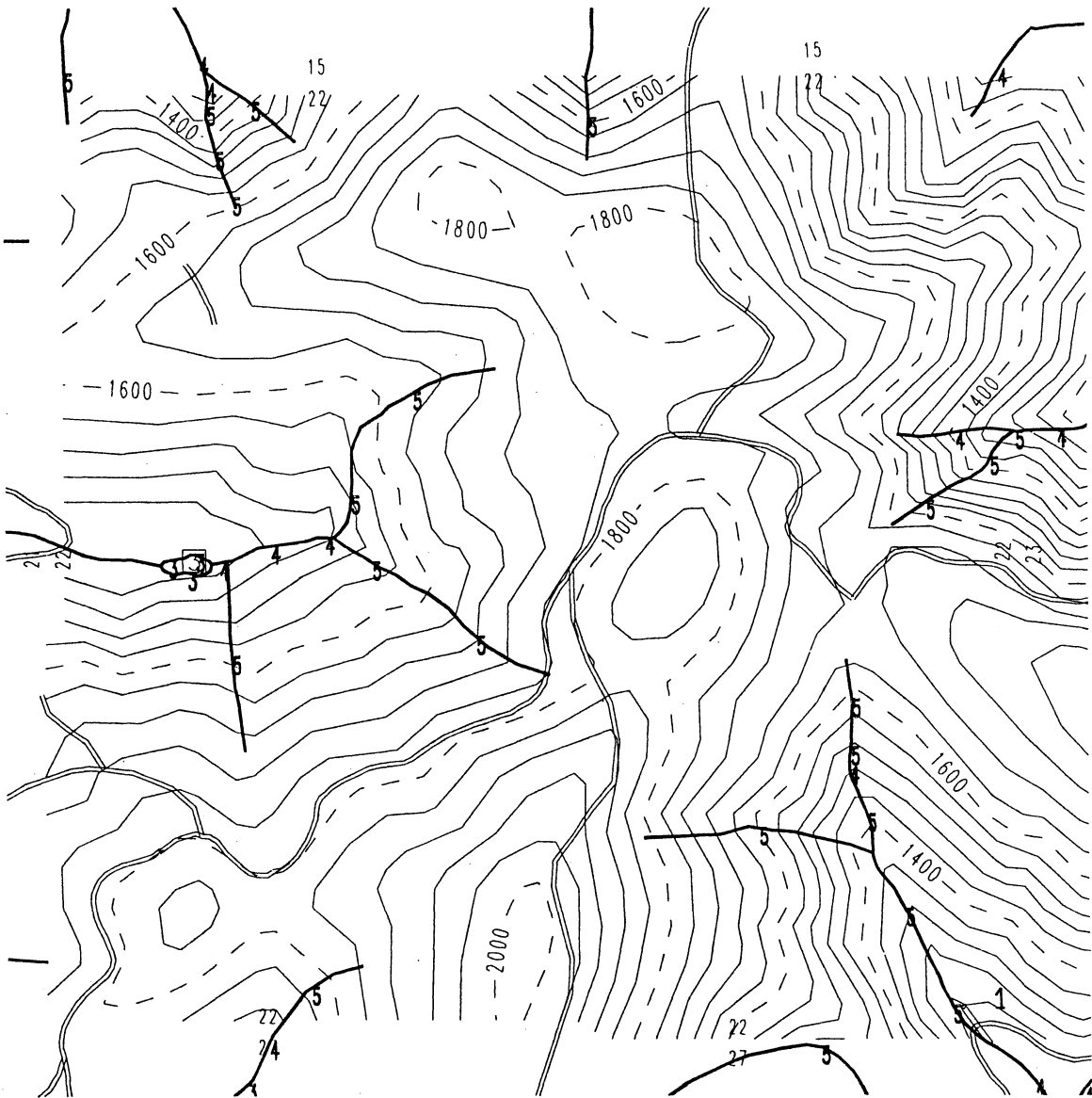
CONTOUR INTERVAL: 40 Feet
NAD 27

LEGEND: See Instructions
DISCLAIMER: See Legend

FOREST PRACTICE ACTIVITY MAP

TOWNSHIP 18 NORTH, RANGE 04 WEST (W.M.), SECTION 22
APPLICATION # 2509101

CULVERTS
1 ROUND PIPE
120" diameter
55' length



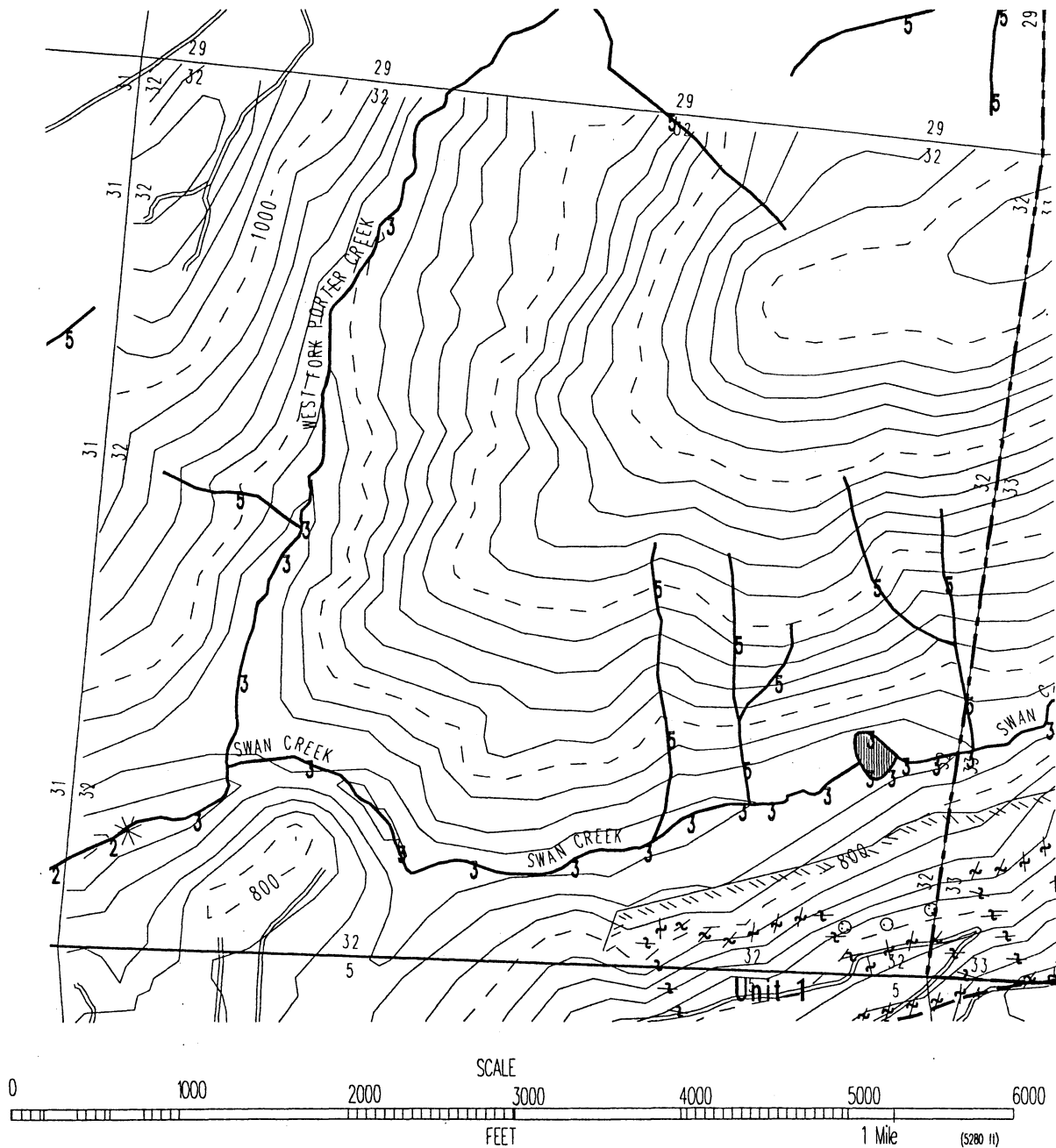
MAP DATE: February 01, 2002

CONTOUR INTERVAL: 40 Feet
NAD 27

LEGEND: See Instructions
DISCLAIMER: See Legend

FOREST PRACTICE ACTIVITY MAP

TOWNSHIP 18 NORTH, RANGE 04 WEST (W.M.), SECTION 32
APPLICATION # 2509101



MAP DATE: February 01, 2002

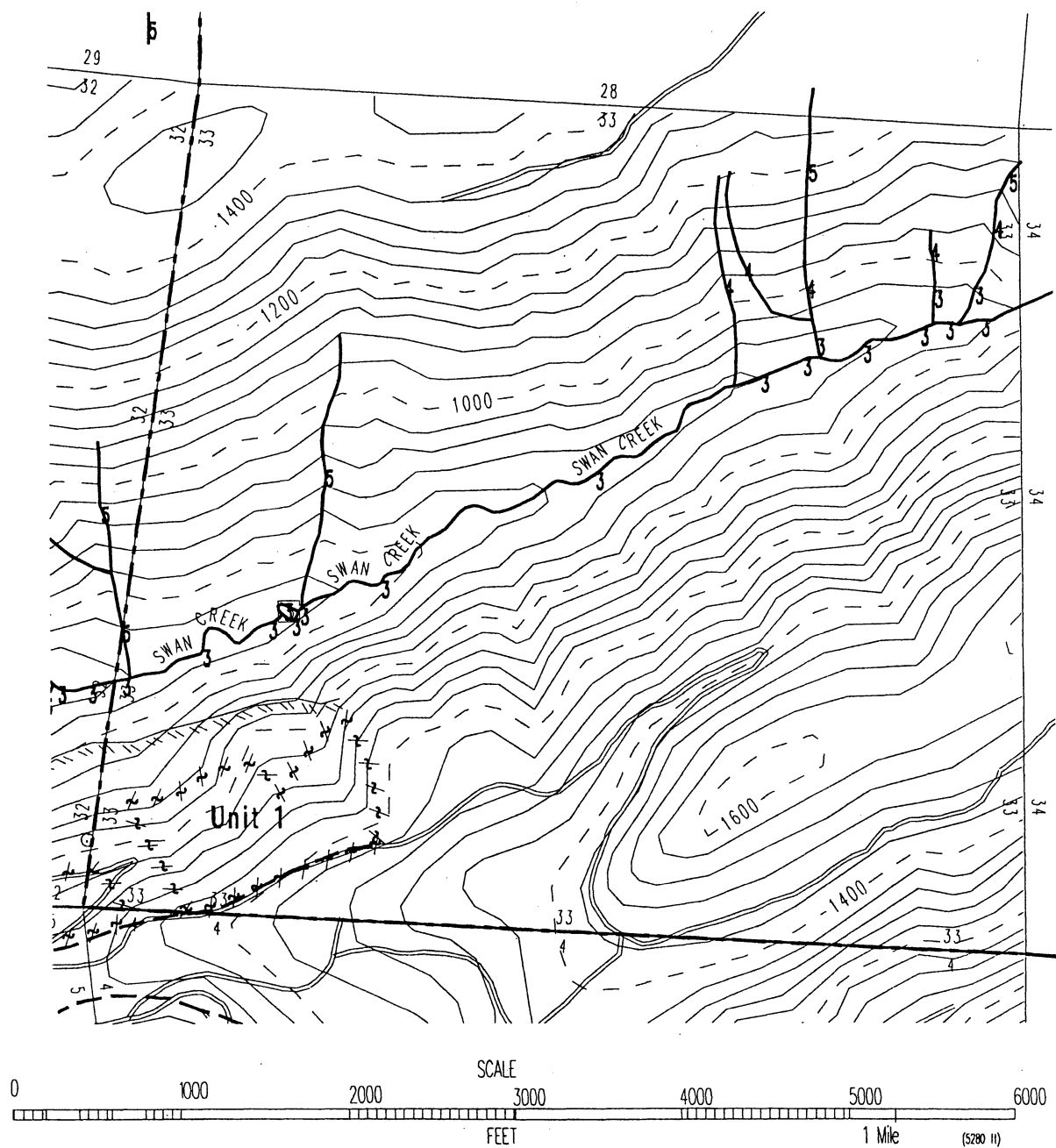
CONTOUR INTERVAL: 40 Feet
NAD 27

LEGEND: See Instructions
DISCLAIMER: See Legend

MAP 4 of 5

FOREST PRACTICE ACTIVITY MAP

TOWNSHIP 18 NORTH, RANGE 04 WEST (W.M.), SECTION 33
APPLICATION # 2509101



MAP DATE: February 01, 2002

CONTOUR INTERVAL: 40 Feet
NAD 27

LEGEND: See Instructions
DISCLAIMER: See Legend

MAP 5 of 5



HYDRAULIC PROJECT APPROVAL

RCW 77.55.100 or RCW 77.55.150

State of Washington
Department of Fish and Wildlife
Region 7 Office
600 Capitol Way North, MS 3155
Olympia, Washington 98501-1091

DATE OF ISSUE: December 13, 2001

LOG NUMBER: 00-D9199-03

<u>PERMITTEE</u>	<u>AUTHORIZED AGENT OR CONTRACTOR</u>
Department of Natural Resources 1405 Rush Road Chehalis, WA 98532 (360) 748-2383	Not Applicable

PROJECT DESCRIPTION: Cable Tailholds, Timber Felling and Yarding

PROJECT LOCATION: See Below

#	<u>WRIA</u>	<u>WATER BODY</u>	<u>TRIBUTARY TO</u>	<u>1/4 SEC.</u>	<u>SEC.</u>	<u>TOWNSHIP</u>	<u>RANGE</u>	<u>COUNTY</u>
		See Below	See Below			See Below		See Below

STREAM/WRIA/TRIBTO: Freshwater streams found on lands owned by the Washington Department of Natural Resources in WRIAs 11 (Nisqually River Basin), 13 (Deschutes River Basin), 14 (Shelton Basin), 22, 23 (Chehalis River Basin), 24 (Willapa River Basin), 25 (Grays/Elochoman River Basin) and 26 (Cowlitz River Basin).

LEGAL DESCRIPTION: All lands owned by the Washington Department of Natural Resources (DNR) within Thurston,

Lewis, Grays Harbor, Wahkiakum and Pacific Counties under the jurisdiction of the DNR Central Region. A map of Sections, Townships and Ranges are attached to the Hydraulic Project Approval (HPA) file copy at the Habitat Division of the Washington Department of Fish and Wildlife, Olympia, WA

COUNTY: Thurston, Lewis, Grays Harbor, Wahkiakum and Pacific

NOTE: This Revised General HPA is issued to those portions of Washington State Department of Natural Resources (DNR), Central Region, lands located in Thurston, Lewis, Grays Harbor, Wahkiakum and Pacific Counties for cable tailholds and timber felling and yarding activities in state waters in WRIAs 11, 13, 14, 22, 23, 24, 25 and 26. This revision was requested by Allen Estep, DNR, on December 13, 2001, to include DNR lands in WRIA 26, Cowlitz River Basin under the jurisdiction of DNR, Central Region. This HPA supersedes HPA 00-D9199-02.

This HPA is an interim approval for the activities listed in Attachment 1. The Washington Department of Fish and Wildlife (WDFW) is undergoing a comprehensive review of the current Hydraulic Code rules as part of a project to seek programmatic Endangered Species Act (ESA) compliance for the HPA program. Renewals after September 30, 2003, will reflect any changes.



HYDRAULIC PROJECT APPROVAL

RCW 77.55.100 or RCW 77.55.150

State of Washington
Department of Fish and Wildlife
Region 7 Office
600 Capitol Way North, MS 3155
Olympia, Washington 98501-1091

DATE OF ISSUE: December 13, 2001

LOG NUMBER: 00-D9199-03

PROVISIONS

GENERAL PROVISIONS:

1. **TIMING LIMITATIONS:** The project may begin **Immediately** and shall be completed by **September 30, 2003**.
2. DNR shall identify on Question 29 of the Forest Practice application that harvest activities will be conducted in accordance with this HPA or if a separate HPA is necessary.
3. Projects on Highly Erodible or Very Unstable Slopes as identified on Washington Department of Natural Resources maps in areas that have not been reviewed by watershed analysis are not included in this HPA and shall require a separate, written HPA.
4. Work shall conform to plans and specifications received by WDFW on the Hydraulic Project Application, for activities listed in Attachment 1, except as modified by this HPA.
5. There shall be no skidding, or ground lead yarding or equipment operation within or across Type 1-3 waters or Type 4-5 waters within 1/4 mile of a Type 1-3 stream, except as indicated in Provision 17.
6. When changing tailholds, the cable shall be moved around or over the leave trees and riparian vegetation to avoid damage to the vegetation. The number of corridors shall be kept to a minimum. Tailholds shall be of sufficient height to minimize damage to riparian vegetation.
7. Cable corridors must be no wider or more numerous than necessary to accommodate safe and efficient transport of logs.
8. Total openings resulting from yarding corridors must not exceed 20% of the stream length associated with the forest practices application.
9. If as a result of felling and yarding of timber, debris enters Type 1-3 or applicable Type 4-5 waters, it shall be removed concurrently with each tailhold change or within 72 hours after entry into the stream and placed outside the 100-year flood plain. Debris shall be removed from dry streams prior to the normal onset of high flows. Large woody material which was in place prior to felling and yarding of timber shall not be disturbed.
10. Within seven days from project completion, bare or disturbed soils which may deliver sediment to Type 1-5 waters shall be stabilized and maintained as necessary with grass seed, hydro mulch, check dams, cross drains, or similar methods.
11. Year-round work in Type 1-3 waters shall be restricted to the placement of cable tailholds across the stream, yarding logs away from the stream, and removal of incidental debris (per WAC 222-16-010) from the stream. No logs may be yarded over the stream.
13. Trees shall be directionally felled away from Type 1-3 waters.



HYDRAULIC PROJECT APPROVAL

RCW 77.55.100 or RCW 77.55.150

State of Washington
Department of Fish and Wildlife
Region 7 Office
600 Capitol Way North, MS 3155
Olympia, Washington 98501-1091

DATE OF ISSUE: December 13, 2001

LOG NUMBER: 00-D9199-03

14. During felling and yarding, trees or logs which enter a Type 1-3 water shall remain where they enter.
15. Precautions shall be taken to prevent the release of sediment to Type 1-3 waters downstream from the project activity. When used, sediment control devices shall be placed landward of the ordinary high water line (OHWL). They include but are not limited to, erosion control fencing, and shall be used as necessary to avoid the release of sediment downstream. Accumulated sediment shall be removed from behind sediment control devices prior to device removal and placed so it will not re-enter the stream.

SPECIFIC CONDITIONS FOR PROJECT ACTIVITIES WITHIN OR ACROSS APPLICABLE TYPE 4-5 WATERS:

16. Where feasible, timber shall be directionally felled away from applicable Type 4-5 streams. Trees which cannot be safely felled away from the stream or which roll into the stream shall be suspended before yarding, per Provision 17.
17. Logs transported across Type 4-5 waters within 1/4 mile of a Type 1-3 stream shall be fully suspended so no portion of the logs or limbs can enter the stream or damage the streambed or banks. If full suspension cannot be achieved on Type 4 and 5 waters due to topography or other operational constraints, an on-site mitigation plan is to be reviewed and approved by the AHB prior to any logging activities.
18. Precautions shall be taken to prevent the release of sediment to applicable Type 4-5 waters downstream from the project activity. When used, sediment control devices shall be placed landward of the ordinary high water line (OHWL). They include but are not limited to, erosion control fencing, and shall be used as necessary to avoid the release of sediment downstream. Accumulated sediment shall be removed from behind sediment control devices prior to device removal and placed so it will not re-enter the stream.

SEPA: Exempt, forest practice

APPLICATION ACCEPTED: December 13, 2001

ENFORCEMENT OFFICER: Sgt. DeMiero (033), Sgt. Makoviney (031), Sgt. Young (039) [P3]

Debbie D. Carnevali (360) 264-5148
Area Habitat Biologist

for Director
WDFW

cc: Jim Fraser, WDFW/Region 6
Gloria Rogers, WDFW/Region 6
Dave Kloempken, WDFW/Region 6
Bruce Baxter, WDFW/Region 6

Key McMurtry, WDFW/Region 6
Steve Bell, WDFW/Region 5
Scott Brummer, WDFW/Region 5

Bob Burkle, WDFW/Region 6

GENERAL PROVISIONS

This Hydraulic Project Approval (HPA) pertains only to the provisions of the State Hydraulics Code (RCW 77.55). Additional authorization from other public agencies may be necessary for this project.



HYDRAULIC PROJECT APPROVAL

RCW 77.55.100 or RCW 77.55.150

State of Washington
Department of Fish and Wildlife
Region 7 Office
600 Capitol Way North, MS 3155
Olympia, Washington 98501-1091

DATE OF ISSUE: December 13, 2001

LOG NUMBER: 00-D9199-03

This HPA shall be available on the job site at all times and all its provisions followed by the permittee and operator(s) performing the work.

This HPA does not authorize trespass.

The person(s) to whom this HPA is issued may be held liable for any loss or damage to fish life or fish habitat which results from failure to comply with the provisions of this HPA.

Failure to comply with the provisions of this Hydraulic Project Approval could result in a civil penalty of up to one hundred dollars per day or a gross misdemeanor charge, possibly punishable by fine and/or imprisonment.

All HPAs issued pursuant to RCW 77.55.100 or 77.55.200 are subject to additional restrictions, conditions or revocation if the Department of Fish and Wildlife determines that new biological or physical information indicates the need for such action. The permittee has the right pursuant to Chapter 34.04 RCW to appeal such decisions. All HPAs issued pursuant to RCW 77.55.110 may be modified by the Department of Fish and Wildlife due to changed conditions after consultation with the permittee: PROVIDED HOWEVER, that such modifications shall be subject to appeal to the Hydraulic Appeals Board established in RCW 77.55.170.

APPEALS - GENERAL INFORMATION

IF YOU WISH TO APPEAL A DENIAL OF OR CONDITIONS PROVIDED IN A HYDRAULIC PROJECT APPROVAL, THERE ARE INFORMAL AND FORMAL APPEAL PROCESSES AVAILABLE.

A. INFORMAL APPEALS (WAC 220-110-340) OF DEPARTMENT ACTIONS TAKEN PURSUANT TO RCW 77.55.100, 77.55.110, 77.55.140, AND 77.55.200:

A person who is aggrieved or adversely affected by the following Department actions may request an informal review of:

- (A) The denial or issuance of a HPA, or the conditions or provisions made part of a HPA; or
- (B) An order imposing civil penalties.

It is recommended that an aggrieved party contact the Area Habitat Biologist and discuss the concerns. Most problems are resolved at this level, but if not, you may elevate your concerns to his/her supervisor. A request for an INFORMAL REVIEW shall be in WRITING to the Department of Fish and Wildlife, 600 Capitol Way North, Olympia, Washington 98501-1091 and shall be RECEIVED by the Department within 30-days of the denial or issuance of a HPA or receipt of an order imposing civil penalties. The 30-day time requirement may be stayed by the Department if negotiations are occurring between the aggrieved party and the Area Habitat Biologist and/or his/her supervisor. The Habitat Protection Services Division Manager or his/her designee shall conduct a review and recommend a decision to the Director or its designee. If you are not satisfied with the results of this informal appeal, a formal appeal may be filed.

B. FORMAL APPEALS (WAC 220-110-350) OF DEPARTMENT ACTIONS TAKEN PURSUANT TO RCW 77.55.100 OR 77.55.140:

A person who is aggrieved or adversely affected by the following Department actions may request a formal review of:

- (A) The denial or issuance of a HPA, or the conditions or provisions made part of a HPA;
- (B) An order imposing civil penalties; or
- (C) Any other "agency action" for which an adjudicative proceeding is required under the Administrative Procedure Act, Chapter 34.05 RCW.

A request for a FORMAL APPEAL shall be in WRITING to the Department of Fish and Wildlife, 600 Capitol Way North, Olympia, Washington 98501-1091, shall be plainly labeled as "REQUEST FOR FORMAL APPEAL" and shall be RECEIVED DURING OFFICE HOURS by the Department within 30-days of the Department action that is being challenged. The time period for requesting a formal appeal is suspended during consideration of a timely informal appeal. If there has been an informal appeal, the deadline for requesting a formal appeal shall be within 30-days of the date of the Department's written decision in response to the informal appeal.

C. FORMAL APPEALS OF DEPARTMENT ACTIONS TAKEN PURSUANT TO RCW 77.55.100 or 77.55.200:



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A person who is aggrieved or adversely affected by the denial or issuance of a HPA, or the conditions or provisions made part of a HPA may request a formal appeal. The request for FORMAL APPEAL shall be in WRITING to the Hydraulic Appeals Board per WAC 259-04 at Environmental Hearings Office, 4224 Sixth Avenue SE, Building Two - Rowe Six, Lacey, Washington 98504; telephone 360/459-6327.

- D. FAILURE TO APPEAL WITHIN THE REQUIRED TIME PERIODS RESULTS IN FORFEITURE OF ALL APPEAL RIGHTS. IF THERE IS NO TIMELY REQUEST FOR AN APPEAL, THE DEPARTMENT ACTION SHALL BE FINAL AND UNAPPEALABLE.